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# THE JOURNAL

OF THE

## Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

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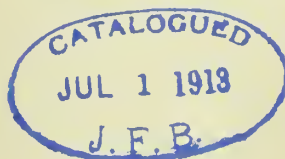
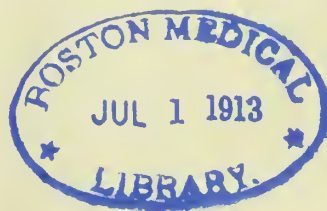
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JULY, 1911, TO JUNE, 1912







# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies

Issued Monthly under direction of the Publication Committee

ADDRESS ALL COMMUNICATIONS TO 3525 PINE STREET, ST. LOUIS, MO.

Volume VIII

JULY, 1911

Number 1

E. J. GOODWIN, M.D.,  
EDITOR

PUBLICATION } W. H. BRUER, M.D., Chairman  
COMMITTEE } A. W. McALESTER, Jr., M.D.  
                  } M. A. BLISS, M.D.

### PRESIDENT'S ADDRESS

#### THE THINGS THAT ARE DONE AND THE THINGS THAT NEED DOING \*

HERMAN E. PEARSE, M.D.  
KANSAS CITY, MO.

It was with a profound sense of appreciation that I undertook one year ago the office of president of this Association. It is with a mingled sense of thankfulness and regret that I reach the hour which marks the close of my term of office; thankfulness that much of progress has been achieved; that the hold of this association on public confidence has been strengthened; that I have had some humble part in the cementing of the bonds of union between the state and this great Association; thankfulness also that no great disaster has overtaken the good ship while I have been her pilot. There is a sense of regret, however, that comes with the severance of the ties that bind the working officers of this Association together; a regret that much we had hoped to do is yet undone; that the finished work we hand to our successors is as nothing to the unsolved problems which yet confront us.

"I hold every man debtor to his profession," says Bacon. Much as we may disregard the burden of public duty, it lies at our doors. The active burning questions of the hour cry for solution at our hands and lessen the satisfaction we feel at our accomplishments.

There still exists in Missouri, as there exists all over the world, a disease known as tuberculosis. Its ravages are widespread; its victims are from all walks of life. It invades the homes of many of the people of our state causing illness, deformity, suffering and death. Its victims are innocent of wrong-doing, and their downfall is always the result of infection from some other case of the same disease. Tuberculosis is an infectious disease. It travels by infected air,

food, water and milk; by dust blown into our homes and inhaled into our lungs and scattered over our food. Always can the disease be traced back by one of these carriers to another case.

The infectious germ is the tubercle bacillus. The tubercle bacillus is a living germ, and, like all other spores and seeds, it does not easily die. It lies dormant in dust and waste places until introduced into our bodies. Under favorable conditions, it grows and rapidly multiplies and produces the disease known as tuberculosis.

When the favorable location happens to be the lungs, the disease is called consumption. No tissue or organ of the body escapes, however; tuberculosis of the bones, of the joints, of the bowels, of the bladder, of the brain, each takes its toll of victims; and in every county lie its sufferers. Worst of all, there is no record of their location, and no authentic report of the extent of this condition. Not until they die and must have a death certificate does the State of Missouri, officially, know of their existence. Yet each one who suffers from the disease, especially in the form of consumption, supplies large number of infectious germs to the world at large for the downfall of others who are brought into contact with him. The tuberculous convict may infect his cellmate, his tablemate, his workmate, his guard or his visitors. The tuberculous school child may infect his classmate, his seatmate, his playmate, his teacher or his janitor, and the same or worse is done by the tuberculous teacher. The tuberculous workman in shoe shop, cigar factory, overall or clothing factory may infect, by contact, his fellow-workman, and through the products of his hands he may infect the public at large. The insane in our asylums who are tuberculous may infect all who come in contact with them—roommates, tablemates, guards and nurses. No one of the above, however, can begin to compare in danger to the people of the state with the careless consumptive, able year after year to walk about the streets and stores and churches and public buildings and to scatter millions of tubercle bacilli to become a menace to his fellow men. The uncared for consumptive

\* President's Address, read before the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting, held in Kansas City, May 16-18, 1911.

is a public menace. He is no less a menace because some doctor or healer or other ignorant, misguided person loudly proclaims that he "has n't got consumption." The opinion of the individual in doubtful cases must be subservient to the accurate knowledge of science in the hands of the state officials of known integrity and ability. The menace on the street, in public places, in schools, in persons, in factories and in institutions should be stopped. It can be stopped, because boiling water and fire and chemicals can kill every germ in dust, clothing and food. To stop it requires the strong hand of the state to segregate the careless and dangerous tuberculous citizen. It requires the patience and wisdom of the state to educate its people through their schools and colleges.

It is necessary that we remove tuberculosis out of the range of what we call a disease of personal and individual responsibility. We may be sorry for the consumptive; we must help him as far as possible, but at the same time we must protect ourselves and others who are well by placing tuberculosis over in the category of social responsibility. We must cease to regard it as a liability and a burden of the victim: we must regard it as a liability, a burden and a charge on organized society. Hon. Charles G. Duryee, M.D., mayor of Schenectady, and former health officer of that city, says: "A very different situation has existed for some years in regard to a few diseases, such as small-pox, scarlet fever, and other acute contagions. As to these, it has been recognized in law and in practice that they are a menace to the entire community, that the inadequate treatment and adequate protection of the household is not a matter to be determined by the ability of the particular patient to pay therefor, but it is to be determined by the resources of the public treasury, and the efficiency of the local health administration. It is recognized that illness of this character is the concern, not of the individual patient nor of the individual household, but of the community as a whole: that equal standards of efficiency of treatment, of medical oversight, of nursing, of isolation, of food, of disinfection, and the other safeguards employed in sanitary supervision, should be applied to all alike; that none should be too poor to receive such assistance, and none sufficiently rich to escape therefrom."

So now, if we are to succeed in eradicating tuberculosis, we shall take it up in school, in factory, in public, in institutions and in private homes, as we do small-pox, scarlet fever and other infections, and deal with it at public expense for the alleviation and cure of its victim and the protection of his neighbor. As a state measure, suitable appropriation of public money should be made and placed in proper hands to insure the solution of the problem at the public expense.

Our prisons and poorhouses are not sanitary and not well cared for from the standards of sanitation.

May I remind you, men and women of this audience, that in cellhouse "B" of the State Penitentiary at Jefferson City there is no sanitary plumbing, that night buckets must be used and must sit in the cells all night and contaminate the air; that 400 men on an average are kept in this cell house for thirteen and one-half hours each night with just *one forty-fifth part* of the fresh air nature intends each to have and which he needs. That cell house "C" with 120 cells and 200 prisoners, and cell house "D" with 320 cells and 500 prisoners, is in worse condition than "B." Let me ask you to get the whole of the sickening details from the special message of Governor Herbert S. Hadley regarding the control and prevention of tuberculosis, and read them when next you go to pay your taxes. Read them again when you vote for representation and join your efforts with those of your present governor, Herbert S. Hadley, for better things. No representative should receive your vote next year without he promises to work for sanitary reforms in our prisons and public institutions.

The poorhouse evil is still untouched in many counties. "There can be little doubt that the number of deaths annually in Missouri poorhouses might be cut in half by radical changes in their management."

"This is shown by the decline in the number of deaths in poorhouses where conditions have been greatly improved in recent years. The largest death-rate seems to exist in those poorhouses that are conducted by what is known as the 'lease system,' the care of the poorhouse and its inmates being let to the best bidder. As one poorhouse superintendent put it, 'several years ago, the poor were let for \$38 per head. Under that treatment nine out of nineteen died. They now pay \$72 a head per year, and find that it is cheaper and more humane.' A superintendent this year says, 'It (the poorhouse) is run on the lease system; lowest bidder gets the contract, which makes it very hard on the superintendent and also on the inmates. There ought to be a law to regulate the price and make the court select the best man to care for the poor.'

"Of course, there is not much utility in discussing sanitary conditions in Missouri poorhouses as long as the lease system prevails in more than half the counties of the state. Under this system, it is impossible that tuberculosis patients, who require above everything else an abundance of wholesome and nutritious food, should be properly treated, for the lease system means that the superintendent has to make his wages out of what he can skim from the inmates."

Let us, with these awful facts in mind, inform ourselves, each in his own county, of all conditions prejudicial to public health. Let us hold



public health meetings as we have been doing in the past. We cannot fail in doing good if we continually strive to educate the people to better things and the foundation of such teachings is to see and understand the people's needs.

I wish to enter my emphatic protest, as president of this Association of almost 3,000 strong and influential men; as a citizen who feels an interest in the welfare of this state, and as a doctor who has taken a hard and sacrificing part in the education of physicians in private schools in the past, against the position taken by the Board of Regents of our State University, and particularly Mr. Ross Hill, president of the university, in regard to the teaching of rational medicine by the state of Missouri. The state constitution declares in establishing the university that "all departments" shall be maintained. The medical department has not been maintained. This Association has waged a bitter fight for higher medical education throughout the state of Missouri and for the promulgation of public health information among the people. It was this Association and its committees who secured the adoption of the Hall medical bill in 1901 requiring an examination to test the applicant's fitness for the practice of medicine, and thus took the first step in the control of then existing bad conditions. The ten years intervening have seen no cessation of the fight for higher standards and better health laws and better doctors. We have a right to expect our great State University to be, as it were, out in front of us, holding up an illuminating example to guide us. Instead, we find them abandoning the last two years of teaching and openly threatening to abandon all teaching of scientific medicine. We ask for state leadership and state fixation of standards, and are met with stories of "no money." We ask for a fair division of funds with the agricultural department, the law department, the school of mines, journalism, arts and science, and are met with hasty exclamations of dismay at the mere thought of such a thing. We gather our members from the four corners of the state to Columbia to pledge our loyal support to any move looking toward complete, earnest, active, aggressive teaching of public health and scientific medicine and are met with sneering coolness and an interrupted and divided audience and no orderly plans, or ideas of plans, for betterment of conditions are presented to us. I would most emphatically recommend the president and a part, at least, of the Honorable Board of Curators of our State University to the attention of our governor as either unwilling, or unable, or unfit, to grapple successfully and solve the question of medical education in Missouri. Our people are dying of tuberculosis, of typhoid fever and of other preventable diseases. We are entitled to the broad, active support of our great university and competent and able assistance in the conservation of human life just as much as the mineral interests

are entitled to their Board of Geology and Mines and their School of mines; or as the live stock interests are to the cure of their animals. And on behalf of the people of Missouri, our Association demands it.

Let us now turn to some of the things accomplished this year just past. The Milk Commission of Jackson County has established the Weeden Laboratory at Kansas City and has given expert advice and assistance to our health department in bettering milk supplies in this district. In St. Louis a tremendous amount of most excellent work has been done in putting an end to illegal practice in that city. The cooperative study of school hygiene has been undertaken in every county of the state. The active awakening of the Missouri teachers has been forwarded and assisted by the county societies in affiliation with this body until instruction, most valuable, has been secured, and movements for child-life conservation and children's health conservation are in active progress. The great work done by Governor Herbert Hadley in the control of tuberculosis in the state has been assisted wherever meetings have been called by members of our Association who at their own expense and at the sacrifice of their time have attended and given able lectures and addresses. Our members have accepted appointments on all important committees and commissions and have counseled and directed and assisted by the aid of their special training and knowledge to the great advantage of the state. Growing steadily in power for good, in strength for assistance and in wisdom for counsel, we are becoming more and more a power in the state for the public good.

As I stated in the beginning of this address, "Every man is debtor to his profession." The members of our Association have given ample returns to the public on the debt of honor and I trust and believe will long continue so to do.

## ORIGINAL ARTICLES

### SOME PROBLEMS AND RESULTS IN CANCER INVESTIGATION \*

LEO LOEB, M.D.  
ST. LOUIS, MO.

#### INTRODUCTION

Questions concerning the health of the individuals and of the community were not considered to be of public interest until relatively very recent times. Our apparent helplessness in combating the ravages of disease was one of the causes of this apathy, and the second cause was the fact that the public did not understand to what degree the health of individuals affected the

\* An address read at a public meeting held under the auspices of the Medical Society of the City Hospital Alumni, St. Louis, May 11, 1911.

well-being of a community. This is now fully recognized. One individual suffering from a certain disease can transfer the same disease to many others, as is well known in the case of the common contagious diseases, and even of tuberculosis. But even if there is no direct danger of contagion emanating from one patient and afflicting a healthy person, there remains the responsibility we all have toward our neighbor who may be suffering. Our perfect happiness is not compatible with a suffering friend or acquaintance.

There remains furthermore the economic aspect of disease, which is of considerable importance. Such economic considerations induced the various states and communities to erect and maintain, for instance, agricultural experiment stations, where the condition of life and growth of plants and animals was investigated scientifically at a period when questions of human life and growth were still considered a negligible quantity. There is also another consideration which induces us to give our attention to questions of public health. None of us knows whether sooner or later members of his own family, or his own person, might not be affected by a certain disease. How effectively public interest will be aroused to questions of health depends, however, on still another factor—namely, on the actual status of scientific investigation. There must be at our disposal the scientific means of investigating the conditions and character of a certain disease. Without such means our interest could not find a practical expression. Thus it was natural that the great discoveries in bacteriology made toward the latter part of the last century should focus our interest on the common infectious diseases and on tuberculosis, and this resulted in great progress in our knowledge and treatment of these diseases.

There remained one important, dreaded disease that, apparently, resisted the ordinary means of investigation, where science had to be contented with the mere observation of its destructive activities in human beings. I refer to that affection known as cancer. Cancer investigation appeared to be sterile, and the public was hardly aware of the prevalence and importance of this disease. A great change has taken place herein within the last eleven or twelve years. Instead of confining our attention to the observation of cancer patients, and to the microscopic study of the diseased tissue, we began to investigate systematically whether cancer occurs in lower animals as well as in man. And indeed we found that animals are affected by the same varieties of cancer as man. Scientists began to call the attention of veterinarians to this disease, and to ask for their aid and cooperation. We not only found that animals are affected by cancer, but it was found, furthermore, that in a certain number of cases, such cancer can be experimentally transmitted from one animal to another. This

discovery presented to us the means of observing in a manner quite impossible heretofore the conditions under which tissue growth takes place. Now problems of various kinds could be attacked that were of the greatest theoretical as well as practical interest. Mostly small animals (mice and white rats) were used for these experiments, and the methods used were on the whole not complicated. A small particle of the cancerous material was put under the skin of a rat or a mouse with a needle. The process was hardly more painful than the hypodermic injection, so often used in the case of patients. The tumor growth itself was not painful. The rats and mice continued to eat and behaved in a manner similar to normal mice until the tumor became very large, when they were usually killed by inhalation of chloroform.

As a result of these newly acquired means of investigating such an obscure disease, experimental cancer investigation was taken up in almost all European countries, also in America, and even in Japan, and it was soon found that the special needs of these investigations required special facilities, and institutions for the investigation of cancer were founded in various countries. There exist several such institutions in this country—in Massachusetts and New York. Outside of the East, St. Louis is the only city in which a scientific laboratory for cancer research is maintained. Some of these institutions are maintained by the state; others are privately endowed. The financial means at the disposal of these institutions vary very much. In general we can say that their usefulness corresponds with the funds at their disposal.

While active cancer investigation was and still is carried out in these institutions, national societies for cancer investigation were founded in this country, as well as in the various European countries, in Japan and Argentine, that aimed at an exchange of ideas of the various individual workers, and furthermore could take up on a larger scale work to which the isolated institutions were less adapted, as, for instance, statistical studies, questions of public health and the instruction of the public. Several years ago these national societies were united into an International Association for Cancer Research, that holds a congress every three years; the first of the congresses having been held in Germany in 1908, while the second congress met in Paris last fall. At these congresses the various governments were represented by special delegates. The increased general interest in cancer investigation is also shown in the fact that the International Exhibition of Hygiene, which has just been opened in Dresden, has a special division devoted to cancer, and various investigators in this field of science have been asked to send exhibits showing some of the results of their work.



It might, perhaps, be well to turn now our attention to some of the actual problems in cancer research, and first to ask what we understand by the term cancer.

Before we attempt to answer this question it might be advisable to state that the animal and human body consists of small, only microscopically visible units that are called cells. There are certain varieties of cells and they have different names. Those cells which cover the skin and form the lining of internal organs are called epithelia; other cells that fill the interstices underneath the epithelial cells are designated as connective tissue cells. These various kinds of cells form larger combinations which we call tissues. Thus we speak of epithelial and connective tissues. Normally the arrangement of different tissues and the boundary line between them is quite definite. It may, however, happen that at a certain place in the body one kind of cells, one tissue, begins to grow to an unusual degree, while the other neighboring tissues do not participate in such a growth. Such abnormally growing tissue we call a tumor. If these growing cells that form the tumor continue to grow indefinitely, and if they penetrate into neighboring tissues and destroy them, then we speak of cancer. In studying early cases of cancer, we see in cancer of the skin for instance, that the epithelial cells which form the outer lining of the skin, begin to grow down into the underlying layer of connective tissue and gradually take its place.

We distinguish, therefore, two varieties of tumors, benign tumors limited in their growth, and indefinitely growing or malignant tumors—the latter we call cancer. While the ordinary infectious diseases, like small-pox and tuberculosis, exert in the main a deleterious effect through certain poisons produced by microorganisms, in cancer such disturbances are primarily absent. It is essentially a disease of cell- or tissue-growth. The equilibrium between certain cells or tissues which exist in the normal organism is disturbed; a certain part of a tissue or a few cells begin to *proliferate* and to invade neighboring tissues. They penetrate bone, cartilage and break through into the blood and lymph vessels, and set up secondary growths at other places of the body. Such secondary growths take, therefore, their origin from transferred tumor cells. Gradually the cancer tissue destroys important organs, breaks through the skin—or other body surfaces—secondary infection by microorganisms takes place and the individual thus affected dies. Very rarely does a spontaneous recovery occur. All tissues of the body may give origin to cancer. If it originates from the epithelia covering the outer or inner surfaces of the body, we call it carcinoma, and cancers originating from the interstitial connective tissue are named sarcoma. But from whatever tissue the cancer takes its origin, it usually starts to grow at a localized area of the body, and

from a practical point of view this is a very important fact. It makes it possible for us to eradicate the disease, if we find it at an early stage, by removing thoroughly all diseased tissue. It is clear that if the patient waits too long until the cancer has invaded the surrounding tissue, or until metastases have been formed in distant organs, a thorough eradication of the cancer is very difficult. It is therefore of the greatest possible importance that a patient suffering from cancer seek the advice of a physician at as early a stage of the disease as possible. The earlier treatment is begun, the better are the prospects of a definite cure.

Comparative studies have shown that tumors occur not only in man but in all the classes of vertebrates; furthermore, some species of animals are very much more prone to be affected than others. Thus cancer is very much more frequent among dogs than among sheep. It is frequent in mice and rats but extremely rare in guinea-pigs, and likewise very rare in rabbits. It occurs in fish, amphibia, reptiles and birds, but it seems to be relatively rare in these animals. It is found in domesticated species as well as in those living in a wild state. There exists as yet no basis for the statement which we find occasionally in the literature that cancer is much more rare in wild than in domesticated animals.

Furthermore, we now know that, just as in man, certain cancers are much more prevalent than others—in the human race cancer of the stomach and uterus being relatively frequent—so we find that each species of animal has its peculiar kind of cancer. Cancer among cattle in the stock yards is in a large majority of cases a carcinoma of the inner angle of the eye, a place, therefore, where foreign bodies lodge. In the white mouse carcinoma of the breast is by far the most prevalent tumor; while in the white rat we may consider sarcoma as a typical tumor. It is clear that the experimental study of such tumors offers a more favorable field for the investigation of the growth and of the character of cancer cells than the mere observation of patients, especially if we should be able to transfer the disease to other animals. Now, after the transplantability of tumors had been established, it was found that in all tumors examined at that time, transplanted cells remained alive in the inoculated animal, and gave rise, through their multiplication to the subsequent tumor formation. Under the microscope we could observe even after transplantation through many generations of animals that the offspring of the original tumor cells were still living and multiplied, and thus we are almost forced to assume that cancer cells have the potentiality of immortal life. Furthermore, it has been found that the tumor cells of a certain species do not grow in all animals but only in the same or very nearly related species. Thus a



tumor of the rat does not grow or does not continue to grow in a mouse, and vice versa. This new method of experimentation permitted us also to test the resistance of cancer cells to various physical and chemical agencies in the test tube outside the body, and to compare it to the behavior of normal cells. Thus we found that the sensitiveness to high temperatures of tumor cells, and of normal cells is very similar. Pieces of tumors kept in various fluids at body temperature in the test tube, die very much more rapidly than pieces on ice. It is, however, possible, to keep ordinary tissues, as well as pieces of cancer alive outside the body, and to make them even grow in the test tube, if certain gelatinous culture media are employed similar to those used in the growth of bacteria.

Through the use of certain chemical or physical agencies that act on pieces of tumors in the test-tube it is possible to diminish greatly the virulence of the cancer material without killing it. After inoculation of such artificially weakened tumor pieces into animals, the subsequent growth in the inoculated mouse or rat is very slow. In many cases even a spontaneous retrogression of the cancer takes place after an initial growth. Thus it is possible to produce at will retrogression of tumors in animals, and such animals in which a tumor has retrogressed spontaneously have in consequence of this retrogression become immune against a subsequent inoculation with virulent tumor material.

It is, however, not only possible to diminish the energy of growth of cancer, but we may also increase it at will through the application of mechanical stimuli. Thus it usually happens that if you excise a piece of a tumor and transplant it either into another animal or into another place of the same individual, all pieces of the transplanted, as well as of the original tumor from which pieces have been cut out, assume a more vigorous growth. A similar result can in certain cases be obtained by pulling a thread through a tumor, thus exerting a mechanical stimulation. This increase in energy of growth, caused by mechanical stimuli, explains a phenomenon frequently observed by surgeons. They find quite commonly that a tumor grows more vigorously when it recurs after an incomplete excision. This increased rate of growth in recurring tumors is the result of mechanical stimulation. In this case the experimental investigation of cancer in rats and mice assisted us, therefore, very much in the understanding of conditions which we find in patients suffering from tumors.

The experimental investigation provided, furthermore, a most desirable opportunity for the study of immunity against cancer growth. Immunity we call a condition in which naturally, or through treatment, an individual has become resistant against the attack of a certain disease. Thus, the vaccination with the ordinary vaccine,

protects against an attack of small-pox. We furthermore know that if certain bacteria or their toxins are injected into an animal, the blood-serum of the injected animal gains new properties which enable it to protect another individual injected with that blood-serum to resist the injurious action of the bacteria or their toxins. Thus the diphtheria antitoxin is a blood-serum that cures diphtheria. Very naturally, attempts have been made to procure similar sera that might have a curative action in the case of cancer. Such attempts have, however, so far been almost altogether unsuccessful, inasmuch as it was found that the blood of animals injected with cancer cells did not possess any marked curative effect when injected into animals inoculated with cancer.

While, therefore, such efforts to produce immunity against tumor growth have so far failed, we have been more successful in other directions. It was found possible to produce experimentally a partial immunity against the growth of inoculated tumor through vaccination. Quite generally we can state that an animal in which an inoculated tumor is growing is to some extent, in consequence of this growth, resistant to a later inoculation with cancer. The growth of inoculated cancer calls, therefore, forth some mechanisms that are unfavorable to the development of cancer. We notice here a tendency to self-limitation of the disease, although under natural conditions such a tendency is not able to overcome the cancer growth.

We stated above that an animal in which we caused a tumor to retrogress spontaneously has thereby become immune against further inoculations with cancer; but even by injecting into animals parts of normal organs, like spleen or liver, the animal becomes to a certain extent immune against further inoculation with cancer material. Such results open the way for the treatment of patients afflicted with cancer, open a new field of therapeutic effort that promises to aid in the cure of cancer, and indeed a few favorable experiences have already been recorded. We must, however, realize that at the present time it is too early to predict the ultimate outcome of these efforts.

Whatever the direct cause exciting cancerous growth may be, there is no doubt that in many cases certain factors exist that predispose to cancer, and that these factors are in part, at least, inheritable. So much we can state at the present time, although we have to confess that very little exact knowledge exists as yet in this regard. We now know that certain strains of animals, for instance of white mice, are very much more liable to develop cancer than others, although both are apparently subjected to the same external influences. It may be that the frequency with which, in the human race, cancer appears in certain families—the family Bonaparte for instance—also

depends on inherited predisposing conditions. The infrequency of cancer among natives of Africa and Australia and among the American Indians may also depend on such hereditary predisposing factors. More definite knowledge exists concerning other predisposing factors in animals and in man. The marked development and functional activity of the breast in females acts in this way in white mice. Cancer in white mice affects quite commonly the breast, and we find, therefore, female mice to be almost exclusively affected by cancer. In the human race it has also been observed that during pregnancy cancer may assume a more rapid growth. Pigmented moles, predispose to the development of a peculiar kind of pigmented, very malignant tumor. A certain skin disease affecting children, xeroderma pigmentosum, usually ends in the development of cancer. Old age predisposes to cancer in various animals as well as in man, thus cancer in cattle is usually found in old cows. Certain malformations, due to errors in early embryonic life, or embryo-like structures found in the ovaries and owing their origin to the development of eggs in the ovaries without a previous fertilization, are liable to become transformed into cancer.

In most cases, however, the existence of such predisposing factors is not in itself sufficient; an external condition has to be added in order to cause the development of cancer. Thus in cases of xeroderma pigmentosum, the skin affection we mentioned before, light rays are the exciting factor; while in normal individuals the ordinary light rays are unable to produce cancer; on such a prepared soil as in xeroderma rays have the power to induce the cancerous growth. But if we still further increase the intensity of light, or ultra violet rays, we obtain cancer even in normal persons that are exposed to the rays, reflected by the surface of the water, or to the direct sunlight; thus in sailors, cancer occurs occasionally on the exposed parts of the body surface. Roentgen rays, if acting during a period of many years in small quantities on the skin, lead almost invariably to cancer formation on the exposed unprotected extremities of the operator. In these latter cases the external factor, the stimulus to tissue growth, is so strong that we can dispense altogether with the predisposing factors, and even experimentally cancer has recently been produced in rats through the use of Roentgen rays. Chronic irritation, due to long-continued ulceration of the skin, stomach or other organs, or irritation due to the presence of stones in the gall-bladder, of certain parasites (*Bilharzia*) in the bladder is not rarely followed by development of cancer. It is certain that in some cases, even a single injury, a fall, a blow affecting internal organs, is soon followed by the appearance of cancer. In these latter cases the internal predisposing cause which probably exists has so far escaped recognition.

If we review these and some other similar facts we can have no doubt that the conditions under which cancer originates are not altogether unknown to us. To some extent we know, therefore, the "cause" of cancer; but our knowledge is as yet incomplete. We can only partially answer a question asked very frequently: Is cancer caused by microorganisms? Results obtained in animal experimentation enable us now to state that certain cancers are indeed in all probability caused by microorganisms. It could be shown that a certain sarcoma found in fowl is inoculable into other fowl through the injection of a filtered, finely-ground suspension of the tumor material. Such a filtrate is free of cells, but nevertheless transmits the tumor. We have, therefore, to assume that microorganisms transfer the disease of sarcoma in fowl. In the case of other tumors, we have not succeeded in separating tumor cells and microorganisms, as I stated before; but even here we cannot exclude the possibility that microorganisms are present. There are even certain facts that point to such a conclusion. I will mention an especially striking example of this kind: In a number of tumors—carcinomas—we have found that after inoculation not only the transplanted carcinoma grew, but that besides a new tumor of a different kind began to develop, namely, a sarcoma. In this case it is very plausible to assume that a microorganism had been transferred from the transplanted cancer to the connective tissue of the host, and had here induced cancerous-cell proliferation. We now know that in certain plants bacteria can produce tumors that resemble cancers, as, for instance, the crown gall which is found on our fruit trees. In no case, however, have we so far been able to show directly the presence of microorganisms in animal or human cancer. Under the microscope no protozoa or bacteria can be seen. All announcements of such alleged discoveries were later found to be based on an erroneous interpretation of microscopic pictures. Even if microorganisms should be the cause of other tumors, as well as of a certain kind of sarcoma, such organisms could merely act through chemical means, and they would represent only one of the various conditions in cancerous growth which I mentioned before. The presence of microorganisms would not detract from the importance of the study of the other external and internal factors. We can indeed produce experimentally growths resembling cancer in some respects through the influence of chemical agencies alone. Furthermore, we can induce, through the action of certain chemicals, certain tissues to penetrate into other surrounding tissues; but this experimental cancer-like growth has so far been only temporary, while in real cancer such growth is permanent. But, notwithstanding such deficiencies in our knowledge, the results obtained within the last few years in the



field of experimental research throw much light on the mechanism of cancerous growth.

We have so far considered some of the conditions of origin and of growth of cancer; let us now turn our attention to cancer as it appears in the human race.

#### STATISTICS

The statistical studies on cancer have given some very interesting results. It has been established that cancer is increasing in frequency and that this increase has been noticeable for the last sixty years. Thus the mortality from cancer in England and Wales per million living has been from 1851 to 1860, 317. From 1861 to 1870, 384; 1871 to 1880, 468; 1881 to 1890, 589; 1891 to 1898, 712, and in 1896, 764. Therefore, from 1861 to 1896, an increase of approximately 100 per cent. Within the last fifty years the mortality from cancer has in some countries become three times as large. This increase is not limited to one country, but extends over the whole civilized world. Thus a very careful statistical study of cancer in the German State of Baden has shown that from 1883 to 1907 the cancer mortality increased 30 per cent.; namely, from 780 per million inhabitants in 1883 to 1,020 in 1907. In Buenos Ayres, the largest city of South America, the mortality from cancer increased from 660 in 1880 to 900 in 1907. Similar results have been obtained wherever careful investigations were undertaken.

While there has been thus a remarkable increase in the frequency of cancer all over the civilized world, there has been a decrease in other diseases, as, for instance, small-pox and phthisis. In England and Wales the death-rate from phthisis in 1861 was 2,475, and in 1896, 1,307; therefore, a decrease of almost 100 per cent. It might be that this decrease in the mortality from other diseases, the fact that more people that would have died in former times from small-pox, phthisis and certain other diseases, live now to an old age, and are, therefore, more liable to be attacked by cancer. Such an objection has to be taken into consideration the more so, as we know that on the whole cancer is a disease of later adult life. Up to an age of 40 years the mortality from cancer is almost negligible; between 40 and 50 years it begins to increase, but the real cancer age is between 50 and 75. In later life there seems to be again a certain decrease. It can, however, be shown that the age factor is not responsible for the increase in the cancer death-rate. If we compare the mortality from cancer not in the whole population but per million living in each age period, we find the same corresponding percentage increase in cancer. More people between the age of 55 and 65 years die to-day from cancer than did twenty or thirty years ago. There is another objection which has

to be taken into consideration. The skill of physicians in recognizing cancer is increasing, and the registration of the cause of death is more accurate to-day than it was in former times. We can, however, assume that mistaken diagnoses would alter the number of cases of cancer in either direction. Certain conditions were called cancer in former years which now would be classified differently. It is, therefore, not probable that this factor is responsible for such a general increase to be noticed in city and country alike, and the probability is very great that the figures cited above signify a real considerable increase in the mortality from cancer.

More women die from cancer than men. One out of fifteen to twenty-one men, and one out of nine to twelve women who reach the age of 35 die eventually of cancer. This prevalence of cancer among women is due to the fact that cancer of the uterus and ovaries, and cancer of the mammary gland are relatively frequent among women. In certain regions more women die of cancer than of tuberculosis; in some countries cancer is more frequent than in others. Thus the cancer mortality is relatively high in Switzerland, Sweden, Norway, Denmark and southern Germany. It is considerably less in Hungary and Italy, and generally in the Mediterranean countries and very low in Iceland and Brazil. In America it is not quite so high as in some European countries, but here also it is steadily increasing. In the southern states the death-rate from cancer is much less than in some of the northern and eastern states. Wherever careful statistical studies have been made, certain localized areas were found where the death-rate from cancer was especially high. Such districts have been found in Germany, France, England, and also in this country.

Very interesting is the difference in the frequency of cancer found among different races. The Aborigines in Africa and in Australia, and the Indians in America, are rarely affected by cancer, certainly very much more rarely than white people. This difference in the cancer rate is not due to the direct influence of the climate. White people living under the same climatic conditions are much more liable to become cancerous. In India, and among the natives of the neighboring countries, cancer is also much rarer than among white people. The same seems to be the case in China and Japan. It appears that cancer among the Chinese and Japanese living in this country is likewise rarer than among the Americans.

Although the frequency of cancer differs, therefore, widely in different countries, it occurs everywhere; no part of the earth has been found to be free from the disease.

If we make a more detailed study of cancer in the various European and American people, we find that cities and country alike are affected.



and no marked difference in the prevalence seems to exist between city and country. The differences in the frequency with which cancer affects certain occupations are on the whole not very marked, if we except certain callings. There is some evidence that persons employed in housework, and certain classes of unskilled labor, and those exposed to the abuse of alcohol, are more prone to be affected by cancer. Persons exposed to the action of tar, of certain dyes, of arsenic, chimneysweeps, become cancerous in a relatively large proportion of cases. The geological formation of the soil does not seem to be important. There exists, however, some evidence that tends to show that cancer is more frequent in houses or villages situated in hilly and mountainous, well-watered, woody country in which the ground and houses are liable to be damp.

A statistical study of the frequency of cancer in different organs of the body gives some interesting information. The organ most frequently attacked by cancer is the stomach. This applies to both male and female patients. If we consider women exclusively, we find cancer of the genital organs (uterus, ovaries, mammary gland) to be almost as frequent, or sometimes more frequent, than cancer of the stomach. Relatively common is cancer of the intestines, and especially of the rectum, and also of the mouth. Cancer of the mouth is much more frequent in men than in women. This distribution of cancer is approximately the same in the different European countries and in North America. It does not hold good in the case of those people in which cancer is more rare. Here different varieties of cancer seem to preponderate, as far as the meager statistical data obtainable indicate. Among the aborigines of tropical countries sarcoma seems to be more prevalent. Among the Hindus in India cancer of the stomach seems to be relatively rare. In Kashmir, where the natives carry small stoves near the skin of the abdomen, thigh cancer develops frequently in the skin of the abdomen or thigh as the result of burns. In Assam cancer of the mouth is relatively frequent, and this is due to the fact that the inhabitants are accustomed to the chewing of betel nut, from which irritation of the mouth results. An appreciation of these observations is of the greatest importance. They indicate where to begin in our efforts to prevent cancer. As we said before, in most cases a combination of internal and external factors is responsible for the production of cancer. Now in the majority of cases it is at present impossible to influence the internal factors; but the external factors can, to some extent, be eliminated. Let us consider from this point of view a few examples of the most frequent types of cancer. Cancer of the uterus occurs in very many cases in women in which during labor the uterus had been torn and in which the tears had not been adequately repaired, or in women in which

a long continued catarrh of the uterus existed. Cancer of the stomach is in many cases—in just how many we cannot state with certainty—preceded by chronic ulcer of the stomach. Cancer of the lip occurs frequently in smokers, in which at a certain place of the lip a process of constant irritation was produced as a result of the smoking. Cancer of the tongue is often preceded by white plaques of the tongue which may have been caused by syphilis, or in other cases cancer of the tongue may be produced through the irritation of the sharp edge of a tooth. Cancer of the gall-bladder is perhaps in the majority of cases preceded by gall-stones that cause a chronic irritation in the gall-bladder. Cancer of the skin has been caused by long continued irritation of light, of Roentgen rays, of certain chemicals, or by the irritation of pigmented moles.

More examples might be cited in which external irritants acted in a similar manner, but the instances cited are sufficient for our purpose. We wish to show that to a considerable extent it is in our power to eliminate these external factors. By early medical or surgical treatment it will be possible to remove these irritating conditions. Especially older people ought to give attention to the state of the skin as well as of internal organs, in which there is present a chronic inflammatory condition. We have every reason to believe that by giving thorough attention to tears and inflammation of the uterus, by removing gastric ulcers that are becoming chronic, by removing thoroughly, especially in older people, sore spots of the skin that show no tendency to heal, many cases of cancer will in the future be prevented. Another conclusion may be drawn from our past experience. Suspicious places should be removed thoroughly without leaving a remnant of the irritated spot. Incisions that are not thorough are much more dangerous, may have much more serious consequences than leaving it undisturbed and doing nothing. As I have mentioned before, incisions into a tumor, pulling a thread through it, acts in many cases as a stimulus increasing the energy of growth. It will be necessary to spread the knowledge of these conditions in the origin of cancer, and to insist on their importance. It will be interesting to notice the effect of such preventive measures on the cancer mortality. If cancer is established, if preventive measures have not been used, or have been without avail, a surgical operation is advisable in the large majority of cases. Within the last fifteen years the results in the operative treatment of cases have been steadily improved through advances made in the surgical procedure. Cancer of the uterus, of the breast, and even of the brain give better results than in former times, and a considerable number of patients have been cured through operations that without operations would have been lost. But in many cases the results of operative treatment are not at all satisfactory.

Thus of all patients suffering from cancer of the uterus, approximately only 24 per cent. can be saved through an operation. Only one in six or seven persons suffering from cancer of the stomach is cured through an operation, and not quite one-half of the patients afflicted with cancer of the breast are cured. These relatively bad results are to a great extent due to the fact that very many patients ask the advice of surgeons at a time when the cancer is already far advanced, and a thorough operation removing all diseased tissue has become impossible. It is, therefore, of the greatest importance that if certain signs that indicate the presence of a cancer appear no time be lost, and a trustworthy surgeon be consulted. There is no doubt whatever that many more lives will be saved in the future than has been the case in the past if cancers are removed in the early stages of the disease. It is, therefore, necessary to spread the knowledge of the first signs of cancer and of impressing the public in general with the importance of early action in the case of suspected cancer. The beginning of such an educational campaign has been made in several European countries; pamphlets have been sent to physicians, instructive articles were published in the daily press and in some magazines, and printed instructions were given to individual persons. Much less has been done in this country. But all these efforts were mainly concerned with the cancer of the uterus; they ought to include cancer of other organs as well. Such an attempt must not be a passing effort, but ought to be continuous, if lasting results shall be achieved. This work was initiated by physicians and university teachers. More recently medical societies have taken it up. Within the last few months the German central committee for cancer investigation has decided to enter this field with all possible energy. I believe our various medical bodies also should give their services and attention to these educative measures. Furthermore, there should not only be a constant effort made to educate the public in the early recognition of the disease, but the instruction should be extended to include the consideration of all so-called precancerous states, chronic inflammatory conditions that notoriously lead ultimately to the development of cancer in a large number of cases.

The recognition of cancer of external organs and of the uterus is on the whole not difficult, but there are cases of cancer of internal organs where doubt may exist as to the character of the disease. Here recent investigations into the biochemistry of cancer have given us some methods which promise valuable assistance in the diagnosis. Certain properties of the blood of cancer patients differ from those of other persons and this difference can be determined without serious inconvenience to the patient. These methods are, however, not yet generally used. The experience of the coming years will show how far they are

applicable in the routine diagnosis of obscure cases.

The surgical treatment of cancer is not the only one on which we can rely. In the last decade the Roentgen rays have been used extensively in the treatment of cancer. Very good results have been obtained in certain cases, namely, in superficially situated cancers as, for instance, of the skin; they can frequently be cured by the use of Roentgen rays or radium. Cancer of the internal organs or even far advanced cases of cancer of the skin are usually inaccessible to the beneficial action of Roentgen rays. A certain number of cases of sarcoma, especially of the bones, otherwise incurable, have been cured by the injection of a vaccine prepared from cultures of two kinds of bacteria; the streptococcus and the *Bacillus prodigiosus*. This vaccine is known under the name of Coley's vaccine; Dr. Coley of New York having done most creditable work in the development of this kind of treatment.

Quite recently, stimulated by interesting results obtained in the studies of immunity in animals inoculated with cancer, attempts have been made to treat cancer by immunization or vaccination with material prepared from cancer. It is much too early at the present time to foretell what the outcome of these experiments will be, and how far it will be possible to improve the efficacy of these methods. A few favorable results seem to have already been obtained. We are certainly not only justified in continuing these investigations but, considering the hopeless condition of so many cancer patients, it is our duty to do so. Naturally these therapeutic efforts have primarily to be undertaken in special institutions, which possess the necessary means to carry out these experiments with sufficient accuracy and care.

We are almost at the end of our very incomplete consideration of cancer. Let us now briefly recapitulate some of the results obtained in cancer investigation especially within recent years, and then state what ought to be done in order to make our efforts to prevent and to cure cancer successful. In the first place we have learned to know various conditions that are important factors in the development of cancer. We learned that some of these factors, namely, the external factors, chronic irritation of various kinds, can to a great extent be prevented. We know that other so-called internal factors cannot be influenced at the present time. Whether these various factors act directly or only indirectly, namely, by enabling certain microorganisms to gain access to the tissues, we cannot yet state positively, but this deficiency does not detract from the value of the knowledge of the factors which we gained and which, in many cases, will be sufficient to diminish the frequency of cancer; but we have advanced further. We now know that certain animal cancers are caused by microorganisms, and in the case of other cancers we have found facts



which point to the probability of such an origin. We have succeeded in a number of cases to produce new cancers in animals by inoculating them with a cancer of another kind. We have found other factors that produce certain cancer-like growths, namely, the development of ova without fertilization in the ovaries and certain other development defects. Now whether in such cases microorganisms have to be added in order to produce cancer we cannot say at the present time; but we can state positively that we have shown experimentally—and our observations on human patients confirm this statement—that cancer is not contagious in the ordinary sense of the word. It does not resemble small-pox, nor even tuberculosis in this respect. We do not need to fear to nurse cancer patients. There are many indications pointing to an hereditary transmission of cancer in a restricted sense. Cancer appears to be more liable to occur in certain strains of animals of the same species than in others, and our observations on the frequency of cancer in different races of man seem to confirm these conclusions. Much more work, however, needs to be done in this direction. We have been able to study the various cancer cells, and we found wherein they differ from normal cells in their growth and in their chemistry. We found marked differences between normal and cancer cells and they explain some of the characters of cancerous growths. We learned under what conditions the virulence of cancerous growths can be increased and how to diminish it. We now know that there exist differences in the reactions of animals which are spontaneously affected by cancer, and animals experimentally inoculated. We have learned certain conditions that protect animals to some extent against inoculation with cancer and we are studying factors that determine the virulence of tumor growth in animals. Some of the facts thus ascertained we are beginning to apply in the treatment of cancer patients. Through statistical studies we have learned interesting facts concerning the distribution of cancer in animals and in man. We have developed some methods that help us in the recognition of certain obscure cases of the disease; but all these studies are hardly in the beginning of their development. They date back not much more than a dozen years. This is a very short time, considering the complexity and the importance of the problem, and this leads us to the second point: What shall be done? Let us fully understand that it is in the interest of public health, and therefore of human happiness; in the interest of all of us, that cancer should ultimately be eradicated, or that its ravages should at least be diminished as much as possible. There is only one road that will lead to this goal, and this is the thorough study by experiment and observation, but mainly by experiment in lower animals, of the conditions under which normal tissues become cancerous, and through which cancer can be

cured or prevented. Complete knowledge of the disease alone will lead to its radical cure. Such studies have, to a great extent, to be carried out in lower cancerous animals where the conditions are sufficiently similar to those found in human cancer. Successfully they can be carried out only if sufficient means are provided for these investigations. Without the necessary means our work will be unsatisfactory. It is, therefore, in the interest of all of us that institutions for cancer investigation should have the necessary funds for carrying out their work. While all our future progress depends on scientific investigations, some measures can be taken at the present time to prevent or to decrease the suffering caused by this disease. The knowledge leading to an early recognition of cancer should be spread methodically among the people so that early treatment can be instituted and, perhaps more important still, the public should know of the conditions that are liable to lead to cancer and should learn to give attention to such precancerous states. Facilities should be provided in cancer hospitals for special courses to physicians in which the methods used for the early recognition of cancer should be taught. Through an extension of the social service connected with cancer hospitals, incurable patients who cannot be taken into the wards of the hospital, should receive at their own home expert treatment and nursing; and last, a detailed statistical study of cancer in certain territories in the various states should be undertaken in cooperation with the physicians of a certain region. One more word in conclusion: Let us be active in the cause of public health; let us try to prevent disease and to recognize it at an early stage, but at the same time do not let us be governed by fear that some day we may be afflicted with this disease; furthermore, let us preserve our equanimity if we should become affected, and let us give our help and sympathy without fear of infection to those already suffering from cancer.

#### THE SIGNIFICANCE OF ABDOMINAL PAIN AND THE MALADMINISTRATION OF OPIUM \*

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The purpose of this paper is not to present this subject fully and in detail, but to note some facts relating to abdominal pain and enter a single but emphatic protest against a much-abused practice in the treatment of such pain.

Let us first note the nerve-supply of the abdominal walls and viscera, viz., the great sympathetic nerve system with its abdominal and pelvic plexuses—the phrenic and vagi nerves. These nerves innervate the abdominal viscera and are not sensory nerves, except the phrenic supply to the dia-

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phragm. The cerebrospinal nerves only have the sensory function as well as being motor nerves to the belly muscles. More definitely the sensory function is supplied by the phrenic to the diaphragm, the lower six intercostal, lumbar and sacral nerves for abdomen and pelvis. Now from the investigations of Lennander, M. Ramström, Wilms and others, some interesting facts and deductions in regard to the cause of abdominal pain have been presented. Lennander in 1907, before the American Medical Association, summarized his work and observations as follows:

1. Pain does not originate in abdominal organs supplied by sympathetic or vagi nerves.

2. All pain originates in the abdominal walls, more especially in the parietal peritoneum and subserous connective tissue supplied by cerebrospinal innervation.

3. Stretching parietal mesenteric attachments of stomach, intestine or other viscus, or a band adhesion, will invariably excite pain.

4. Displacement of parietal peritoneum from its normal relation to muscle makes pain.

5. Chemically different substances in contact with the parietal peritoneum, as contents of stomach, gall-bladder, or abscess, makes parietal hyperemia and consequent pain.

To have pain we must have a sensory spinal nerve to transmit the sensation and not a motor or sympathetic nerve. How then can we experience excruciating abdominal pain with no viscus supplied with sensory nerves? Manifestly we must have excitation of a parietal sensory spinal nerve. The mesentery and suspensory attachments of stomach, liver and colon are attached to the parietal peritoneum and parietes. The spinal sensory nerves take their exit from the spinal column in close relation to the lymphatic glands retroperitoneally. Now, infection and lymphangitis greatly increase the sensitiveness of adjacent sensory nerves. Note in analogy the pain in an angina with accompanying lymphangitis and lymphadenitis. Also, one kind of infection may produce more pain than another. So also lymphangitis and lymphadenitis resulting from infection of peritoneum, or from bowel, gall tract, or other viscus, make these sensory nerves much more acute to the sense of pain. Now take infection with lymphangitis and add to that a pulling or tugging on mesenteric attachments, and we have cause for still more pain.

According to Wilms, intestinal colic is due entirely to the stretching of the mesenteric attachments of the gut. Lennander claims that every distention or contraction of a gut pulling on its attachments to the abdominal wall is necessarily painful because it stretches cerebrospinal sensory nerves. He made this experiment on a patient under local anesthesia. Clamping a gut 40 cm. long and inflating until mesentery became stiff and stood out strong, produced pain. A shorter piece of gut treated likewise also made pain. And a still shorter piece, only 5 cm., was

inflated even to bursting and made no pain, because the arch of mesentery was not sufficiently stretched to pull. However, pulling this same short arch with the fingers made pain. Now, those points most closely attached to the parietes, when pulled on, necessarily produce the most intense pain, as the duodeno-jejunal flexure, the flexures of the large intestine and the most distant part of the ileum. When these parts of bowel contract on their contents or behind an obstruction, they pull vigorously on mesenteries, making various degrees of pain in the parietal nerves. Or should a band contract across a bowel and be attached to the parietal wall, a pulling on it will produce pain. Lennander has also demonstrated the insensibility to pain of the viscus itself. A strong galvanic or faradic current applied to the surface of the liver makes no pain. Pull on or tilt the liver and pain is immediately produced. Pain is produced by displacement or pressure on the parietal peritoneum, and "gripes" are thus explained. Abdominal muscular rigidity is Nature's effort to limit the movements of the abdominal viscus, thereby preventing to some extent mesenteric tugging and parietal peritoneum displacement. We get relief by lying on our belly when having "cramps," lessening thereby parietal pulling.

With the above data it is possible to explain all cases of abdominal pain. And perhaps with a clearer view of the causes of abdominal pain we may be able more accurately to estimate the significance of such pain. Every case of abdominal pain should be most carefully studied, with the accompanying signs and symptoms making up the clinical picture. It is not enough to know the character of the pain and its location, but we must view it as a part of the composite picture of the entire clinical history. If it is recurrent pain it may belong to some disease, such as renal colic, appendicitis, or tabes. With pain after ingesting food we would naturally look to the stomach or intestinal tract—a gastritis or ulcer perhaps. Pain with menstruation, we look to the generative organs. Irregular and persistent pain after eating would suggest the pancreas, the bile tract, or the appendix. Hemorrhoids, fissure, and cancer of rectum, by rectal pain. Sudden severe pain following exertion may mean strangulated hernia, ruptured tubal pregnancy, volvulus, rupture of urinary bladder, abortion, etc. So also will age and sex have bearing. Childhood belly-aches should not blind us to the possibilities of appendicitis, intussusception, pneumonia, or Pott's disease, as causes of abdominal pain in children. Consider occupation and do not forget lead colic.

The location of the pain is also of much significance. We recognize now the classic McBurney's point in appendicitis; the pain and tenderness in the right hypochondrium of a cholecystitis or cholangitis; the deep gnawing epigastric pain of stomach cancer or ulcer; the acute sudden pain of gall-stone colic; or the prostrative



ilio-inguinal pain of renal colic; or the hypogastric pain of distended urinary bladder. Also, we must be cognizant of referred pains, such as pain in the right shoulder in hepatic affections; a tender point over the lower dorsal vertebrae in duodenal ulcer; pain in the thighs in intestine and rectal troubles. Then, also, must be noted points of tenderness elicited by examination, as the well-known McBurney point in appendix troubles, or Rovsing's sign, which is pain at McBurney's point produced by pressure over the descending colon. Naunym's sign of a sore gall-bladder is elicited by hooking fingers under ribs over the gall-bladder, and a deep inhalation is impossible if gall-bladder is inflamed. Pain in the kidney may run down the ureter or to the testicle, while bladder pain may be in the end of the penis. Pain from pneumonia or pleurisy may be abdominal, especially in children.

Another point in the character of pain must be mentioned as important, viz., pain at the onset of disease may be diffuse and become local or *vice versa*. Pain in appendicitis is at first more frequently general and diffuse and later localizes; still later, after peritonitis begins, it becomes diffuse and general again. Ptomain poisoning, on the other hand, produces pain well localized in the epigastric region, and later becomes general and diffuse without the signs of peritonitis. Intestinal perforation gives immediate local pain and later diffuse pain from spreading peritonitis. The relationship of vomiting in acute belly pain is also of importance. Sharp pain preceding the act of vomiting indicates peritoneal infection, while pain following the act of vomiting would point more directly to acute indigestion or ptomaines.

What a broad diagnostic field is the abdomen, and how carefully should we study not only the important symptoms of pain, but all the accompanying signs and symptoms in order to make a diagnosis. With all the data possible and the most careful study it is oftentimes quite impossible to diagnose accurately, differentiation being so difficult. Is this sudden, severe, deep, epigastric pain, prostrating the patient and making him look so pinched, anxious and fearful, a plain bellyache or an acute hemorrhagic pancreatitis, a perforating duodenal ulcer, or a mesenteric thrombosis? Let us have a care when we say a man has only a severe bellyache. A diagnosis of dropsy is more creditable, for there are fewer conditions causing dropsy than abdominal pain. Let us have a care about seeing a patient with acute epigastric pain and diagnosing acute indigestion from inspection only. Remember that a majority of cases of appendicitis begin in just this way.

Even more careful, if possible, we should be when seeing a case of severe abdominal pain with vomiting. Look for hernia, volvulus, bands or other causes of ileus. Many conditions might be mentioned producing similar pictures. Usu-

ally, however, some factor is present that makes it possible to make at least a near diagnosis. Now, when we think of pain being produced by such a variety of conditions, and many of them so grave, it surely ought to stimulate us to be very careful and cautious in interpreting their meanings. We should at least recognize the fact that abdominal pain is a signal of abdominal distress and Nature's method of warning us of approaching danger. It is the herald of disaster, the Paul Revere of a revolution oftentimes. Such being the case, here enters my protest against the too frequent use and bad administration of opium in abdominal diseases heralded by pain. It is dangerous for a physician to cover pain signals with a heavy fog of opium, just as dangerous as for a railroad switchman carelessly to extinguish his red danger signal when the train is approaching wreckage. I say this advisedly and conscientiously, after long experience in witnessing just such wrecking due to thoughtlessly putting out the danger signal of pain. I plead for a more careful diagnosis; and if diagnosis is impossible, we can at least satisfy ourselves by careful and thorough examination whether the case is of gravity before producing the ever ready hypodermic syringe.

Let me urge a careful examination of every belly case, for we cannot be too careful. What may seem an attack of indigestion, of no serious consequence, often may prove to be a case of seriousness; and failure to diagnose early may delay recovery or greatly jeopardize life. Also it is not fair to your counsel to call him to your opium-benumbed patient and thus handicap him in making a diagnosis. He has not the same evidence you may have had in the beginning. Why benumb with morphin the acute appendix case, making it difficult to diagnose and difficult to get consent to operation because the patient is easier, thus losing precious time and allowing perforation and peritonitis to intervene? That is bad, but what is worse is the physician who has the moral obliquity or the asininity to administer morphin repeatedly to a young woman with dysmenorrhea. That does not immediately jeopardize her life, but its repeated use does destroy her health and happiness and the happiness of those dear to her.

But is there no use for opium? Indeed, it is a most beneficent and God-given drug, and its wise administration is to be commended. It should be used to alleviate pain on every occasion that it can be *wisely* used. Use it in some cases of appendicitis if we will *after* we have made a diagnosis and given proper advice, and likewise use it in many other troubles producing suffering. And best of all for euthanasia let us have it. For the poor hopelessly doomed sufferer from malignancy, God has given it us for his comfort, and let us kill his racking, torturing pain. Even more—let us give him dreams of the beautiful, of Elysian fields, of mirages sublime, and renew them as often as they fade.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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 Address all Communications to 3525 Pine Street, St. Louis, Mo.
 

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JULY, 1911

### EDITORIALS

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#### THE DEADLY HOUSE-FLY

With the fact proven and too often demonstrated by the negligence of the laity, as well as of the medical profession, that the house-fly is the carrier of the typhoid bacillus and germs of diarrheal diseases, tuberculosis and other diseases which leave a trail of sickness and death, the warning is once more sounded to kill the house-fly. "Either man must kill the fly or the fly will kill the man."

The St. Louis Health Department has ordered all merchants who sell provisions to screen their products in order to prevent the house-fly from depositing infective materials. It would be natural to suppose that the merchants would cooperate in this life-saving and health protecting ordinance but, according to the published accounts, certain merchants' associations adopted resolutions condemning the ruling of the board of health to force them to screen food products and declared their intention to fight the ordinance in the courts; thus is the humanitarian work of the medical profession made doubly hard. The indifference of the people to the warnings and rules, simple and easily observed though they may be, results in the destruction of more lives and an increase in the population of our hospitals. Nevertheless, the profession must continue its labors. Let us hope that in time the deadly house-fly, and other germ bearing insects, may be as little of a menace to human life as now is the *Stegomyia calopus*, the carrier of yellow fever, and typhoid be as infrequent as yellow fever.

Physicians should impress on all patients the necessity of observing some such rules as the following in the extermination of the house-fly:

Add a teaspoonful of formalin, or 40 per cent. formaldehyd, to a teacupful of water; sweeten and place in the room.

Add a teaspoonful of bichromate of potash to a half-glass of sweetened water and place in saucers about the room. (Put out of reach of children.)

Burning pyrethrum, or Persian insect powder, stupefies insects and they may be swept up and burned. This is non-poisonous to the higher forms of animal life but is exceedingly destructive to insects and flies.

Pour 25 to 30 drops of carbolic acid on a hot shovel and it will create a vapor deadly to flies. Sticky fly-paper.

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#### CLOSING OF UNIVERSITY MEDICAL COLLEGE OF KANSAS CITY

The efforts of the medical profession to raise the standards of medical education in this state and in the United States are gradually—too gradually—meeting with success and each year will see a reduction of the number of colleges and a higher efficiency of those that still exist. The medical profession is accustomed to sacrificing itself to its ideals, notwithstanding that there is a goodly portion in its ranks who prefer visible and material returns for their labors to the consummation of idealistic standards; hence, the low grade college clings to every straw floating in the stream of adverse criticism to justify their continuation. When, therefore, a college that stands in Class A and has a record during its entire existence, placing it in the first grade of teaching institutions, voluntarily closes its doors rather than lower its standard we know that the ideals of the profession still prevail. That is what the University Medical College of Kansas City has done. This institution has been in existence for thirty years and has kept abreast with every advance in teaching medical students that its income warranted; but the march of events and the rapidity of the progress in medicine has been so tremendous in recent years that the institution could not maintain its superior position without raising a large sum of money, and this it was impossible to do. Rather than slip backward it closed its doors.

All honor to the men who recognize the exigencies of such a situation and have the courage to terminate the career of their institution while yet its reputation is untarnished.

In another column we publish the resolutions adopted by the college to close its doors after this session.

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### EDITORIAL NOTES

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THE St. Johns Hospital at Springfield, Mo., will establish a training school for nurses in connection with the regular work of the hospital.

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DR. WALTER H. FUCHS and Dr. James B. Pritchard have been appointed members of the St. Louis Board of Health to succeed Drs. John Young Brown and H. McC. Johnson.

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DR. GEORGE A. JOHNS, formerly assistant physician at the City Sanitarium, St. Louis, has been appointed superintendent of the institution in the place of Dr. J. S. Atkins, who has resigned.

THE Southwest Missouri Medical Association held its semi-annual meeting at Springfield, May 25. About 100 members were present. In the evening a banquet was held at the Metropolitan Hotel.

THE Council on Pharmacy and Chemistry has voted to accept Hegenon, Schering & Glatz, for inclusion with New and Nonofficial Remedies. It also voted that the Roessler & Hasslacher Chemical Co. brand of sodium perborate be listed with non-proprietary preparations of sodium perborate.

DR. H. S. ATKINS, formerly superintendent of the City Sanitarium (insane hospital) at St. Louis, has resigned to enter private practice. Dr. Atkins has established a private home for the care and treatment of mild cases of insanity and drug and alcoholic habitués. The institution is located in Kirkwood, a suburb of St. Louis.

**RAILROAD SURGEONS MEET.**—The Frisco Medical Association, composed of the local surgeons of the Frisco Railroad system, met in St. Louis, May 28, and held a two days' session. Addresses were delivered by W. C. Nixon, vice-president of the Frisco Railroad system, W. T. Tyler, general manager at Springfield, and H. S. King, claim agent at Memphis.

THE Board of Trustees of the German Hospital of Kansas City have set apart one floor of their new fire-proof and sound-proof building for a maternity service and nursery. Modern equipment is being installed throughout. Dr. George C. Mosher has been elected obstetrician and director of the department. Dr. Frank C. Neff will be pediatricist for the hospital.

**MEMORIAL MEETING.**—On May 28, the St. Louis Medical Society held a memorial meeting in memoriam of its members who have died during the past twelve months. Following is the program of memorial addresses: Dr. Gustav Baumgarten, by Dr. W. E. Fischel; Dr. John E. Faber, by Dr. Fred W. Abeken; Dr. Theodore F. Fienup, by Dr. Arthur N. Curtis; Dr. Robert Q. Gray, by Dr. Paul Y. Tupper; Dr. John A. Leavy, by Dr. James M. Scott; Dr. Julius F. Menestrina, by Dr. E. Horace Johnson; Dr. Bernard W. Moore, by Dr. Ed. W. Saunders; Dr. Edwin M. Nelson, by Dr. A. J. Steele; Dr. Warren B. Outten, by Dr. Frank J. Lutz.

THE National Association for the Study of Epilepsy and the Care and Treatment of Epileptics held its tenth annual meeting in St. Louis, June 16.

The objects of the Association are:

1. To promote the general welfare of sufferers from epilepsy.
2. To stimulate the study of the causes and methods of cure of this disease.
3. To assist the various states in America in establishing a proper system of care for epileptics.
4. To advocate the care of epileptics in institutions designed to meet their special needs.

The St. Louis Medical Society entertained the Association in the evening. The program contained a large number of papers dealing with the various conditions this Association is endeavoring to ameliorate.

## MISCELLANY

### UNIVERSITY MEDICAL COLLEGE OF KANSAS CITY CLOSES

Following is the resolution adopted by the University Medical College of Kansas City to terminate its existence at the close of this year's session:

"The University Medical College, during the thirty years of its existence has endeavored to teach medicine according to the most approved methods and has always kept in the forefront of all advances therein. It has therefore been favored to a remarkable degree with the confidence of the medical profession, and points with much pride to the general character of excellence of its graduates and to the marked success and standing which they have held.

"Medicine in the past generation has probably made greater advancement toward the goal of scientific exactitude than any other of the learned professions, and to it has been added a greater wealth of increased knowledge than has been achieved in centuries before. With these great achievements has arisen the necessity for much more highly educated men capable of mastering these enlarged fields of knowledge, and corresponding revolutionary advances in the standards and demands of medical education. Great laboratories with trained specialists in research lines who devote their exclusive time to research work and teaching have become an essential in the equipment of institutions which expect to remain in the forefront of future progress. These laboratories require vast sums of money for their equipment and maintenance to say nothing of the necessary salaries of expert teachers who in this work are shut off from the emoluments of private practice. In consequence the expense of educating a modern physician has in many of our leading institutions been found to run as high as \$1,000 per year for each student. The tuition fees however are in few schools more than \$250 a year, and in the University Medical College are only \$100. To maintain its position in advanced medical education therefore it is evident that no school can be self-maintaining on the basis of its tuition fees as its only source of income. Such education is only possible where endowments are available. Such endowments are lacking in the University Medical College. Up to the present time our work has been equal to the best and to-day we are recognized by the Association of American Medical Colleges and by the Council on Medical Education of the American Medical Association, as one of the four standard schools of the State of Missouri.

"Such a rank and standing however can obviously not be maintained long in the future progress of med-



ical education without endowment. Therefore be it resolved: That the trustees of the University Medical College of Kansas City, Mo., proud of its past, loyal to its many high-class graduates, and devoted to the highest interests of a grand profession, rather than suffer a lost prestige or accept any lesser position among the medical schools of America, do now in view of future necessities, and in the assurance of its present high rank, and for the good of future progress in medical education in Kansas City, and the State of Missouri, announce that with the end of the present teaching year it shall surrender its dearly loved privilege to those institutions financially able to meet the demands of future education in medicine."

### THE EMASCULATED FOOD AND DRUGS ACT

The federal Food and Drugs Act, under the interpretation recently given it by the Supreme Court of the United States, has become practically a dead letter so far as it affords protection against the fraud and cruelty connected with the exploitation of "patent medicines." As was noted last week, the court has decided that the national pure food law does not prohibit false statements on labels or medicines so long as such statements are confined to curative effects and not to composition. To the average quack and "patent medicine" vender, such an interpretation will prove a priceless boon.

It should be borne in mind that the Food and Drugs Act does not require the composition of any "patent medicine" to be printed on the label; it does not even require the presence of any but a very few of the most powerful and dangerous drugs to be made public. A preparation may contain strychnin, prussic acid, arsenic or any one or more of a hundred equally dangerous and violent poisons and no mention need be made of the fact on the label. The "patent-medicine" faker cares little about restrictions regarding the composition of his nostrum; all he asks is permission to make any assertion that he sees fit regarding the curative effect of his preparation. The Supreme Court's decision means that that permission now exists under the federal Food and Drugs Act.

A weak solution of sugar or common table-salt in water, or for that matter a bottle of plain water, may now legally be labeled:

#### CANCEROID

A POSITIVE AND NEVER-FAILING CURE FOR CANCER, TUBERCULOSIS AND ALL OTHER DISEASES

GUARANTEED BY DR. QUACK UNDER THE FOOD AND DRUGS ACT

Such a label, while a tissue of lies, is not illegal under the present pure food law. Hundreds of nostrum venders, when the Food and Drugs Act went into effect, had to discard their "sure-cure" labels because Dr. Wiley held that the law prohibited lying "in any particular." Now they can resurrect their old stock and send out their preparations labeled with the same unblushing falsehoods that were so common before the advent of the pure food law. Every "cancer-cure" faker, every "consumption-cure" swindler, every medical humbug of any kind or description can now resume his miserable trade with a feeling of perfect security, providing he is careful to make no misstatement regarding the composition of his wretched fraud. And he is not required to say a word about the composition of his nostrum unless it contains alcohol, morphin, acetanilid or one of the other eleven drugs or their derivatives that are specifically mentioned in the act!

From what has been said, it is evident that an amendment to the Food and Drugs Act is imperative. The law was passed, after years of opposition on the

part of food dopers and "patent medicine" fakers, for but one object—the protection of the public health. As it now stands it fails to protect the public in a most vital particular, namely, against the cruelly fraudulent claims of the "sure-cure" school of swindlers. The law should be changed at the very earliest moment so that it shall specifically prohibit *every kind* of false statement regarding foods or medicinal preparations. The amendment, moreover, should be broad enough to prohibit lying regarding medicines and foods not only on the labels, but also in all advertising matter dealing with these special products.—*Journal A. M. A.*

## DEATHS

WILLIAM H. RUSH, M.D., Washington University Medical School, 1901, a member of the St. Louis Medical Society, died suddenly in his home at St. Louis, June 2, 1911, aged 44.

HORACE BRAND COLE, M.D., Baltimore Medical College, 1893, a member of Pettis County Medical Society, died at his home in Sedalia, Mo., June 3, 1911, from typhoid fever, aged 49.

HOMER LEE WOLDRIDGE, M.D., Washington University Medical School, 1901; a member of the Caldwell County Medical Society, died at his home in Breckenridge, Mo., May 27, 1911, from tuberculosis, aged 33.

ISAAC RICHARD LANE, Northwestern University Medical School, Chicago, 1867, one of the oldest practitioners in southwest Missouri, died at Alexian Brothers Hospital in St. Louis, May 19, 1911, aged 75. His home was at Mountain Grove, Mo.

## SOCIETY PROCEEDINGS

### Missouri State Medical Association

Fifty-Fourth Annual Meeting, Held at Kansas City  
May 16-18, 1911

#### MINUTES OF THE HOUSE OF DELEGATES

FIRST DAY—TUESDAY, MAY 16

COATES HOUSE

The House of Delegates was called to order by the president, Dr. Herman E. Pearse, at 9 a. m. At roll call the following delegates responded:

COUNTY.	DELEGATE.	ADDRESS.
Adair .....	J. S. Gashwiler, Novinger.	
Atchison .....	J. A. Postlewait, Tarkio.	
Barton .....	A. B. Stone, Lamar.	
Bates .....	Sherman Miller, Urich.	



COUNTY.	DELEGATE.	ADDRESS.
Benton .....	J. R. Smith, Warsaw.	
Boone .....	F. G. Nifong, Columbia.	
Buchanan .....	A. B. McGlothlan, St. Joseph.	
Caldwell .....	C. C. Leeper, Braymer.	
Cape Girardeau .....	B. W. Hays, Jackson.	
Carroll .....	E. H. Musson, Norborne.	
Cass .....	H. S. Crawford, Harrisonville.	
Chariton .....	J. F. Welch, Salisbury.	
Christian .....	W. B. Wasson, Nixa.	
Clay .....	F. H. Matthews, Liberty.	
Cole .....	S. V. Bedford, Jefferson City.	
Daviess .....	H. E. Songer, Jamesport.	
Gasc.-Maries-Osage ..	A. J. Crider, Meta.	
Greene .....	T. A. Coffelt, Springfield.	
Grundy .....	J. M. Stone, Laredo.	
Harrison .....	O. A. Schmid, Bethany.	
Holt .....	W. S. Wood, Oregon.	
Howell .....	J. McB. Johnson, Westplains.	
Jackson .....	A. C. Griffith, Kansas City.	
Jackson .....	J. Q. Chambers, Kansas City.	
Jackson .....	A. J. Welch, Kansas City.	
Jackson .....	E. G. Blair, Kansas City.	
Jackson .....	E. H. Thrailkill, Kansas City.	
Jackson .....	J. G. Lapp, Kansas City.	
Jackson .....	E. F. Robinson, Kansas City.	
Jasper .....	R. M. James, Joplin.	
Jefferson .....	R. E. Donnell, De Soto.	
Johnson .....	W. R. Patterson, Warrensburg.	
Laclede .....	J. W. Lindsay, Orla.	
Lafayette .....	Lewis Carthrae, Corder.	
Lawrence-Stone .....	J. P. Andrews, Marionville.	
Linn .....	T. P. Oven, Brookfield.	
Livingston .....	R. Barney, Chillicothe.	
Macon .....	W. E. Bradley, Ethel.	
Madison .....	Wm. Nifong, Fredericktown.	
Marion .....	A. A. Roselle, Palmyra.	
Miller .....	W. S. Allee, Olean.	
Mississippi .....	H. L. Reid, Charleston.	
Moniteau .....	H. C. Freudenberger, Clarks'g.	
New Madrid .....	J. H. Timberman, Marston.	
Newton .....	O. J. Sloan, Neosho.	
Pemiscot .....	M. B. Hendrix, Caruthersville.	
Pettis .....	D. P. Dyer, Sedalia.	
Phelps .....	S. L. Baysinger, Rolla.	
Pike .....	M. O. Biggs, Bowling Green.	
Platte .....	H. M. Clark, Platte City.	
Ralls .....	T. J. Downing, New London.	
Randolph .....	D. A. Barnhart, Huntsville.	
Ray .....	Robert Sevier, Richmond.	
Saline .....	D. C. Gore, Marshall.	
St. Charles .....	F. J. Tainter, St. Charles.	
St. Louis City .....	Willard Bartlett, St. Louis.	
St. Louis City .....	W. E. Leighton, St. Louis.	
St. Louis City .....	Marsh Pitzman, St. Louis.	
St. Louis City .....	F. C. E. Kuhlmann, St. Louis.	
St. Louis City .....	J. H. Amerland, St. Louis.	
St. Louis City .....	Vilray P. Blair, St. Louis.	
St. Louis City .....	Cyrus E. Burford, St. Louis.	
St. Louis City .....	R. M. Funkhouser, St. Louis.	
St. Louis City .....	Wm. W. Graves, St. Louis.	
St. Louis City .....	R. S. Weiss, St. Louis.	
St. Louis City .....	R. E. Schlueter, St. Louis.	
St. Louis City .....	A. F. Koetter, St. Louis.	
St. Louis City .....	Clarence M. Nicholson, St. L.	
St. Louis City .....	Roland Hill, St. Louis.	
St. Louis County .....	H. G. Wyer, Kirkwood.	
Taney .....	R. M. Irwin, Branson.	
Webster .....	W. J. Rabenau, Fordland.	

Mr. Brown, the mayor of Kansas City, was introduced to the Association by President Pearse.

Mr. Brown welcomed the Association to Kansas City and complimented the medical profes-

sion on the good work it has accomplished, not only in methods of treating disease but also in its work of teaching disease prevention and the elevation of standards of medical education.

On motion, the reading of the minutes of the fifty-third annual meeting of the Association was dispensed with.

On request of the president, Dr. Frank Lutz of St. Louis took the chair while the president read his message as follows:

*To the House of Delegates, Missouri State Medical Association:*

I find from the treasurer's report that we have a working balance of \$5,676 at our command for the ensuing year. This is encouraging. The House of Delegates should conduct the affairs of the Association in the future as in the past in a spirit of progressive activity and at the same time, in wholesome economy. The funds gathered from annual dues should be carefully preserved and expended only where the needs of rational medicine may best be served.

It is, perhaps, the fault of all professional men that they do not take a wide enough view of the needs of the profession as a whole. This possible criticism may well be offset by the practical aggressive stand that we have taken wherever we have seen our way clear to the accomplishment of any good. Applying this view to the question of medical defense, we see that we have so far aided in the defense of our members when assailed unjustly in the discharge of their duty. I would commend the work of the Defense Committee to you as most effective. I would ask your attention to the results they have accomplished. Yet taking a broader view in the light of experience gained in the past, I would recommend to this House that we go further in the future and establish a fund by an increased annual due and that this fund be ultimately made large enough to reimburse doctors for verdicts obtained against them when in the judgment of the Defense Committee the verdict is unjust and when it is a serious burden.

I would further recommend that, as our profession is one that uses its best years in service to humanity which service is often poorly repaid, a committee be appointed to consider plans for either a home or pension for indigent, infirm and aged physicians and their wives and widows. It is well that in the years of our strength we provide for the years of reversal, disaster and old age.

As a means of bettering the condition of our country practitioners, I would recommend that better county poor laws be advocated, whereby the treatment of the worthy poor be left to the family physician of their choice, ordered by a township trustee and paid for by the county court. The present system does not give good treatment to the sick poor, nor does it give ade-

quate compensation to the local physician. We see the wives of the poor man's neighbors assisting in the nursing of the indigent sick. Let the neighbor husbands and property-holders assist in paying for the doctor's services and let the local doctor who resides in that neighborhood receive the patronage and pay that belongs to him. Such a law has worked admirably in other states, and we should have it in Missouri.

So much for the care to be given to our own unfortunate members. What of the new recruits to our ranks? What of the commercial tendencies of the medical sects who are constantly seeking legal power and legal sanction at each recurring legislature? There is but one answer to these questions and they are found in the words of N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association. The recommendations are strong and yet sharply to the point and are grouped under three heads:

1. (a) The appointment of the very best available men on state boards of medical examiners. This is not intended as a criticism of the many men who are now doing excellent work on those boards, but is given as a general proposition. The standards of preliminary and medical education are rapidly being advanced, but it is often the case that a thoroughly trained, well-educated physician is required to take an examination before men who are far inferior to him in every respect.

2. (b) The including of practical laboratory and clinical tests in the examination of candidates for license to practice medicine. The written examination, as given in the majority of states, can be passed by any intelligent person who may have spent a few brief weeks in the study of quiz compends, or in some of the shrewdly conducted quiz classes. The present written examination is not an actual test of a man's fitness to practice medicine, and such an examination could be passed by a man who may never have made an experiment in a laboratory, who may never have looked through a microscope, or who may never have examined a patient.

Again, the examinations for license to practice medicine in this country are much easier than those required in other countries. This fact tends to increase the number of foreigners who flock to this country, including a considerable number who probably could not secure licenses at home.

3. (c) A single portal to the practice of medicine.—Individuals who are to treat human ailments are alike in two respects: In the first place they must make diagnoses in order to recognize what they are endeavoring to treat; and, secondly, what they may fail to do in certain cases, even as much possibly as the things they do, may mean the life or the death of the patient. For these reasons everyone who is to treat human ailments, regardless of the particular methods em-

ployed, should be required to have a thorough training in the fundamental branches of the medical course. The objections to medical sects, therefore, are not so much because they are sects as it is that their followers enter the medical profession with a smaller amount of preliminary and medical training than do regular physicians.

Having now considered the course best to pursue in regard to our unfortunate members and our newly arriving accessions, there remains one duty which the state has failed to perform, and which experience has shown counties will not perform, and that is to carry out the penalties ordered by the legislature for illegal practice. The medical practice act should be enforced by some higher power than the county attorney acting under information given by a resident physician. Such enforcement flavors of personal malice on the part of the informer. I therefore urge that from its increased income the State Board of Health be asked to employ an attorney for this purpose; or other provision be made for the state officials to see that county officers act in cases of violation of the medical practice act.

The work of your chairman this year supplemented by the admirable work of Mr. Howard Gass, former state superintendent of schools, and his successor, Mr. Evans, the present superintendent of schools, and Mr. Lampkin, of Clinton, superintendent of reading circles for country teachers, has opened up a new field of popular education by securing in every county cooperation and joint study of public health by public school teachers and physicians. I would urge that this be kept up and each county society be required not only to hold open meetings for public health teaching but also be urged to form joint reading circles for study and discussion of some one particular book all over the state each year, so that a uniform advance may be made in which teacher and physician are coworkers together.

Respectfully submitted,

HERMAN E. PEARSE, M.D., President.

On motion by Dr. Grindon, seconded by Dr. Kuhlmann, the president's message was referred to the Council for consideration and report at the next meeting.

The report of the Council was read by Dr. Frank J. Lutz:

#### REPORT OF THE JUDICIAL COUNCIL.

The Executive Committee of the Judicial Council begs leave to make the following report:

On account of the burning of the State Capitol, which robbed the Association of the magnificent meeting places heretofore at our disposal during the annual meetings, and because another large association had set its meeting time on the same days at Jefferson City, the question was referred to the executive committee whether the time or the place of meeting should be



changed; and after mature deliberation the conclusion was reached and concurred in by the President and the Secretary that the best interests of the Association and the comfort of its members would be subserved by changing the meeting place from Jefferson City to Kansas City.

The bond of the Treasurer properly executed, as fixed by the Council, is in the hands of the Chairman of the Council.

The year just closed marks the beginning of a new era in the affairs of the Association. Two important changes were made in the manner of conducting the general affairs of the Association: one was the concentration of the offices of secretary and editor in one person, and the other was the assumption on the part of this Association of the entire control of the JOURNAL of the Missouri State Medical Association. Concerning the latter the publishing committee will furnish such data as are of interest to you, and it remains for the Council simply to say that the financial returns have more than carried out the predictions of those who foretold that much of the expense of the publication could be defrayed by the JOURNAL itself. The advantages of combining the offices of secretary and editor have been very striking to the Chairman of your committee, who has been in almost daily touch with the office, which is located in the buildings of the St. Louis Medical Library Association adjacent to the St. Louis Medical Society. It has become a rendezvous of the physicians of this state who quite naturally drift to their own office when visiting the metropolis of the state.

You will also learn from the report of the secretary, and from the various exhibits which he will make, that the executive committee has embraced the opportunity of putting upon a business footing the affairs of this Association by installing a proper system of bookkeeping, and by keeping such records of the personnel of our membership as is necessary to keep in touch with it.

Unfortunately the membership has not increased during the past year; on the contrary, there has been a falling off. To your Chairman it appears that the most potent reason for this must be sought in the fact that the councilors who under the constitution are entrusted with the organization, have not displayed that activity which formerly characterized their efforts, perhaps because they believed that the organization would take care of itself. Experience in other organizations teaches, however, that constant agitation is necessary to maintain and to increase membership. The income of the Association has therefore been reduced and the budget which will be made this year should take into careful consideration that only by reasonable economy and great deliberation can we succeed in maintaining the organization and give its members the benefits of the JOURNAL and of defense and at the same time act in accordance with the avowed purposes of the Association and disseminate among the people knowledge concerning public and private hygiene, preventable diseases and the care of the sick.

I would suggest to the House of Delegates that proper provision be made for having the Secretary of the Association act as its organizer by visiting especially those county societies in which there is a lack of enthusiasm or a falling off in membership. During the past year, with the consent of the executive committee, the secretary has visited several county societies with great benefit to them and a corresponding increase of membership. This work should by all means be continued.

Dr. Funkhouser moved that the report of the Council be received. Seconded.

THE PRESIDENT: The report of the Judicial Council is before the House. One special recommendation should receive your careful consideration, the question of loss in membership.

DR. LUTZ: I would like to ask the privilege of saying a word concerning the work of the councilors. I want to say that every member of the Council in rendering the account of his stewardship to the House of Delegates should consider it not only a privilege and honor, but I think such account should be demanded by the House of Delegates.

When we first organized under the auspices of the American Medical Association, the conditions were such that the councilors visited the county societies only rarely to urge the eligible members to join, because many of the councilors were unable, on account of the expenses of traveling and loss of time were more than the councilors felt free to give. Therefore new councilor districts were created so the councilors could visit the county societies in their districts. From the councilors' reports and from information in the secretary's office from various county societies, I regret to say that the interest on the part of the councilors is not as manifest as it should be. There are something like three or four hundred eligible physicians in the state who are not members of the Association.

The recommendation in this report that the councilors be assisted in their work with county societies is good, and I believe that the secretary should do it. It is true that this would entail a larger expense than is now borne by the Association, but after the first year or so the account would more than balance by the increased membership, and the treasury would have some income flow to it by the income from the JOURNAL, which has been by no means a losing venture and will this year pay for the printing and mailing of the JOURNAL in spite of the fact that last year you increased your expense account very considerably. The income from the advertisements is something like \$1,500 annually. Heretofore the JOURNAL cost something like \$250 to \$260 monthly, so that we are not now in bad shape, and I think we can bear an expense something like \$500 for the secretary to see to bringing the doctors together and put new life into the organization. Many of you perhaps have not thought of how great the benefits are in membership in this society, and that you have defense from it.

DR. AMERLAND: I would like to ask Dr. Lutz on what he bases his figures in regard to the falling off of membership; on the lists of 1910 or 1911? It must be remembered that the meeting of the American Medical Association was a stimulus for the payment of dues so as to be able to register in the National Association. I will say for St. Louis that we are in better condition this year than we were last year.



DR. LUTZ: I will say that, of course, as long as Dr. Amerland is the treasurer of the St. Louis Medical Society the membership will never fall off. But he is one great exception. I based my figures by the returns made by the county societies in my own district, which includes the county of Franklin. We have a falling off of one-half of the members to the State Association. There are, I think, twenty members; seventeen physicians are not members and five are delinquent.

Dr. Funkhouser moved the adoption of the report.

DR. BIGGS: I want to second the motion by Dr. Funkhouser that this report be adopted. Carried.

DR. DORSETT: I move, Mr. Chairman, that a committee be appointed to look into the advisability of having the secretary make visits to the county societies, and report at the next session of the House of Delegates. Seconded and carried.

DR. GRINDON: I desire to offer a resolution:

*Resolved*, That it is the sense of the House of Delegates that members who accept the position of councilors should do so remembering that the honor so conferred carries with it the obligation to give time and thought to the work of the Council, especially in the matter of strengthening the county societies.

On motion the resolution was adopted.

The report of the Committee on Medical Education was received and referred to General Assembly for discussion.

The report of the Committee on Scientific Work was read by Dr. Joseph Grindon, as follows:

#### REPORT OF COMMITTEE ON SCIENTIFIC WORK.

The Committee has striven to continue and enlarge upon the excellent work of its immediate predecessor, and especially in two of its features. First, as to the time allotted to General Sessions. The consensus of opinion is decidedly favorable to frequent General Sessions. At the same time we have sought to keep the success of the section work in mind. This plan has yielded the most interesting programs and seems most acceptable to our members. It will be found that we have arranged for five General Sessions. The other feature concerns the securing of better cooperation between the Committee on Scientific Work and the County Societies. The prediction contained in the report of the last committee that "This cooperation will not only tend to strengthen the Scientific Programs but will facilitate greatly the work of the Committee," has been amply justified by our results this year. The Committee feels that it should seize and profit by the opportunity to extend and strengthen the bond between the local and state organizations by inviting the largest possible cooperation in Scientific work throughout the entire state. We have sought to accomplish this by compliance with a resolution adopted some years ago by this Association inviting County Societies to select from among the papers read before them during the year, some of especial merit to be presented before the State Association. In instances in which no such selection had been made,

the societies were requested to select from among their number one or more to read papers. Answers to these requests were very general and doubtless will be even more so in future; should our successors continue the practice, which we now heartily commend to them. One result this year has been that the number of titles submitted requires us for the first time, as we believe, in the history of the Association, to extend the Scientific work into the afternoon of the third day.

The Committee determined to merge the work of the Sub-section on diseases of the Eye, Ear, Nose, and Throat for this year, with that of the Medical Section. The experience of last year, together with the small number of titles on these subjects submitted this year, seemed to us to make this course imperative.

That provision of the By-Laws which requires that none but members in good financial standing shall take part in the scientific work has been rigidly adhered to on the program. The general notification, consisting of the preliminary program, appeared in the April issue of the JOURNAL. There have been printed six hundred copies of the program for distribution at this meeting, at a cost of \$46.50. The fact that the Official Program appeared in full in the May issue of the JOURNAL made it unnecessary to print a larger number, thus considerably reducing the expense of this item.

The Committee acknowledges its obligations to our Secretary, Dr. Goodwin, for much help and many courtesies.

Respectfully submitted,

JOSEPH GRINDON,  
J. H. DIXON,  
A. E. HERTZLER,  
E. G. MARK,  
J. C. SHELTON,  
ROBERT HALEY,

Committee.

On motion, duly seconded, the report was accepted.

The report of the Committee on Public Policy and Legislation was received and referred to the General Assembly for discussion.

The chairman of this committee requested permission to read the unpublished portions which had been added and to have them inserted and included as a part of this report. This request was granted and said portions were read and ordered to be made a part of the report to be read in the meeting of the General Assembly.

The report of the Defense Committee was read by Dr. F. J. Lutz, chairman.

Moved by Dr. Funkhouser, seconded by several that the report be adopted. Carried.

Dr. Funkhouser moved that the thanks of the Association be extended to the Honorable Morton Jourdan for assistance and services rendered by him to the Defense Committee. Seconded and carried.

DR. AMERLAND: I would like to suggest that the defense fund is rather small for the obligations of the committee. Would it not be advisable to extend an invitation to our members to make a voluntary contribution of \$5 each to this fund; that would mean \$12,000 to this fund.

THE PRESIDENT: The Chair will say that the Jackson County Association has appointed their attorney to formulate a plan on this idea.

DR. GRINDON: It seems to me that this whole matter of defense is still in its experimental stage. The question comes to my mind whether this Association could undertake to pay any part of the damages. A resolution sent out for taxation of county societies will probably throw some light on that. I do not know but what we have enough for our present obligations, and perhaps later we could increase the fund. Dr. Welch, will you state how much we have in the defense fund?

DR. WELCH: \$1,589.68.

DR. MADRY: We have been having some little trouble down our way in regard to paying damages, so that it might be well to go after the attorneys who handle these cases. Usually some doctor who cannot get into the medical society works up the evidence. I have personally investigated some of the suits and have gone to the doctor who was working up the case and have gone to the attorney in the case and have found their data identical. So far as doctors are concerned we do not have any trouble except where some doctor is backing up some lawyer. We have had some of this class of attorneys in my district, who would work up a case and then try to get hush money.

DR. NIFONG: I believe that I understood that Dr. Lutz in his report mentioned the amount of \$450 as the cost of a case. If we have \$1,500 in the treasury, I believe it will not be necessary to go down into other pockets, and that it will be well enough to wait until we have more necessity for this.

DR. CHAMBERS: As one of the delegates of the Jackson County Medical Society, I wish to present some resolutions that our society has formulated in regard to strengthening this defense fund, and we offer these resolutions as a basis for working out an adequate plan of protection:

RECOMMENDATIONS BY THE DELEGATES OF THE JACKSON COUNTY MEDICAL SOCIETY TO THE HOUSE OF DELEGATES OF THE MISSOURI STATE MEDICAL ASSOCIATION.

We recommend that the constitution of the Missouri State Medical Association, and especially the by-laws providing defense against malpractice suits, which was adopted in May, 1909, be amended in order that the powers of the Defense Committee of the State Association may be enlarged and benefits extended to the individual members may be more comprehensive in their scope, and that a plan for medical defense be worked out along the following suggestions:

The dues of the Association should be increased from two to four dollars a year. Of this amount, the sum of six thousand dollars annually shall be apportioned to a legal defense fund.

This committee should be composed of three members, whose terms should expire in one, two, and three years from the time of appointment, thus making a vacancy of but one member each year.

This committee should have control of all claims or suits for civil malpractice instituted against any member of the association.

The member, immediately upon having a claim presented to him for damages arising out of civil malpractice, or immediately upon being served with summons in a suit for civil malpractice, shall forward to the Defense Committee of the State Association a copy of the claim for damages, or with a copy of summons and original petition, if the suit has been instituted, together with a full detailed statement of all the facts relative to the cause in controversy.

The Defense Committee shall thereupon take the matter up with local counsel, in whose selection the member sued or threatened with suit shall have a voice.

The defense shall be conducted by the legal counsel of the defense committee, together with the local counsel selected as above, and all expenses in any way connected with this defense shall be paid by the State Association out of the fund apportioned to the Defense Committee.

A member shall be entitled to this defense until the matter has been finally disposed of in a court of last resort.

We further recommend that as soon as this surplus sum shall consist of twenty-five thousand dollars or more, that all judgments rendered against any member of this association, if confirmed by a court of last resort, be paid by the Association.

The defense above specified refers only to suits for civil malpractice, and is not to be construed to apply to criminal prosecutions or prosecutions which are criminal in their nature.

F. J. IJEN,  
H. E. PEARSE,  
A. W. McALESTER, JR.,  
Committee.

DR. LUTZ: The arrangements in the past have been that the Defense Committee has asked the doctor who is sued, the president of the county society and the councilor of that district for advice as to attorneys in that locality, and we have always made arrangements with that attorney for the fee. The society being poor, we do not pay large fees. We have been fortunate in procuring the services of a gentleman who has cheerfully helped us without a retainer, and for some time to come I fear we will have to be beggars still; but if we had another thousand dollars we could manage. We have fourteen suits now pending. We would just barely get through with a fee of \$100. Unless we have another thousand dollars the committee would feel as though someone would suffer. If the funds in the defense account are exhausted, how can the committee defend any member that comes to it? This seems to me to be the practical side of this business, otherwise we jeopardize the defense of the members.

Dr. Allee moved that \$1,000 be added to the defense committee fund. Seconded and carried.

DR. FUNKHOUSER: Referring to the resolutions offered by the Jackson County Society, I move that a committee be appointed to investigate the suggestions and report at the most convenient occasion later on.



DR. CHAMBERS: I second that motion. We have with us our attorney, Mr. Reed, of Kansas City, for whom I would ask the courtesy of the floor.

DR. PEARSE: We will be glad to hear from Mr. Reed.

MR. REED: A few days ago I was requested by the local society to assist them in formulating certain recommendations to be acted on by this Association with reference to defending malpractice suits. At that time I think the committee did not know that an amendment had been passed in May, 1909, that referred directly to the defense of malpractice suits. These resolutions were drawn up on the spur of the moment with the intention that the State Association would take some action, and refer it to a committee to go more into the details of the subject. The scope should be wide so as to meet all the demands. I assure you that I will be glad to meet with this committee and give them any assistance that I may be able to give. I think that if this Association had a strong organization it would be an incentive to attorneys not to bring suits against any of its members. It has been said that we have members who look around to bring suits against a doctor for malpractice. The physician hands in his bill, and the patient thinks it a little large; he takes it to an attorney, who says, "Here, I will get you out of this, and you will not have to pay the doctor a cent." This is a profoundly important matter to this Association and should receive thorough thought and investigation.

DR. W. H. BREUER: I am quite in favor of this defense fund, and also to increasing it, but as counselor of the twenty-sixth district I will report that it has been hard for some of the men to pay up dues. I am sure that one or two counties in my district will fall off this year in membership. It is hard on the physicians who practice over the hills down there, where fees are small and sometimes no fees at all. We have thirteen members belonging to the society, all good men. A doctor who practices in southwest Missouri and pays \$4 to the county society and \$5 to the American Medical Association feels that he pays a large amount of money, and while it is worth a great deal to him, he does not get out to the meetings, and he will say that he can take a few dollars and employ some insurance company to defend him and let the medical society go.

DR. WELCH (Kansas City): We in Jackson County are very much in favor of this move. The small sum of \$4 a year for the defense fund would not protect any doctor, and is not to be compared with what is paid to any regular insurance company, which will cost anywhere from \$10 to \$25 per year. We have an attorney appointed by this society and have a sinking fund

to defend its members against suits for malpractice. I understood Dr. Lutz to say that there were only eighteen suits brought within the last year. The opinion I got from our attorney was that there were only nine in the last three years.

DR. HARRISON: Many members do not attend the meetings, and while the dues are not high, you will have a falling off if you raise them to \$4. I think it is a very easy matter to become a member of this Association, but I deem it quite an honor. If we have a fund to pay a lawyer he would prevent malpractice suits. If the jury knew that if the damage suit went against you the State Association would have it to pay it would put the case in the same class with railroads. I am not in favor of increasing the dues.

DR. BURFORD: We are doing the very thing we wanted to avoid, discussing it on its merits.

DR. PEARSE: The question before the house is to consider the resolutions of the Jackson County Medical Society, and that a committee be appointed to investigate this and to report at the most convenient occasion later on. Carried.

The Chair appointed the following committee: Dr. J. Q. Chambers, Kansas City; Dr. W. H. Breuer, St. James; Dr. Walter B. Dorsett, St. Louis; Dr. Wm. F. Nifong, Fredericksburg; Dr. A. J. Welch, Kansas City; Dr. E. L. Stewart, Kansas City; Dr. J. H. Amerland, St. Louis.

Dr. Amerland offered the following resolution and moved its adoption:

*Resolved*, That the Secretary-Editor be requested by the House of Delegates to notify all members of this Association to make a voluntary contribution of five dollars to the Defense Fund.

The motion to adopt was lost.

Report of Committee on Medical Education, Dr. C. Lester Hall chairman, was received and referred to the General Assembly for discussion.

DR. PEARSE: The following special committees will report on the proper place on the program:

The Committee on Tuberculosis will report to the General Assembly for discussion.

The Committee on Ophthalmia Neonatorum to report at General Session.

The Committee on Cancer to report at General Session.

The Committee on Necrology to report at General Session.

The report of the Committee on Expert Testimony was read by Dr. Funkhouser, as follows:

By the great loss of this Association in the death of Dr. Outten, Chairman of the Committee on Expert Evidence, it becomes my duty to attempt to make the report for this committee.

Representatives of this Association met members of the Missouri State Bar Association on various occasions, and after due deliberation approved the accompanying bill, which failed to pass owing, *mirabile dictu*, to the opposition, chiefly, of the legal profession. This remarkable state of affairs was surprising in that the legal profession has twitted the medical profession in



lacking in unanimity. It was intimated that we, the medical profession, would not be willing to waive the question of fee and trust the Court's fairness and justice; but the Committee very promptly did so thereby cooperating in the effort to dissipate the opprobrium connected with medical expert testimony. Attached will be found the results of the considerations of said joint committees.

It is recommended this Association continue to cooperate further with the State Bar Association in the efforts to improve the condition of expert evidence in the State of Missouri, and also, through the American Medical Association with the cooperation of the National Bar Association, throughout the United States.

On motion, duly seconded, the report was received.

The treasurer, Dr. J. Franklin Welch, Salisbury, read his report and at the same time offered his resignation. He said he believed the affairs of the Association would be more successfully handled if the treasuryship was combined with the office of secretary since that officer had to receive the money first and then transmit to him. He felt, too, that the work was becoming too arduous for him to continue to fill the office. The report follows:

1910. TREASURER'S ACCOUNT—RECEIPTS.			
May	3	By cash on hand	\$6,928.36
	6	By sale of buttons	52.00
June	28	By exhibits at Hannibal	70.00
Sept.	10	By subscription and sale of JOURNAL	1.20
1911.			
May	9	By advertising in JOURNAL	1,350.51
	10	By interest on daily balance Salisbury Savings Bank	119.10
	16	By dues from county societies	5,420.65
			<u>\$13,941.82</u>

DISBURSEMENTS.			
May	4	To defense committee	\$1,000.00
		To counselor's expenses	222.36
		To committee expenses	281.36
		To annual meeting 1910	225.10
		To supplies for treasurer's office	244.75
		To salaries	2,792.20
		To postage	232.36
		To supplies for secretary's office	766.26
		To JOURNAL expense	2,183.66
		To printing and stationery	317.15
			<u>\$8,265.20</u>
		To balance on hand	5,676.62
			<u>\$13,941.82</u>

1910. DEFENSE FUND—RECEIPTS.			
April	26	To balance in treasury	\$ 926.40
May	10	To cash from general fund	1,000.00
1911.			
May	6	To interest on daily balance	53.28
			<u>\$ 1,979.68</u>

## DISBURSEMENTS.

1910.			
Aug.	15	To Morton Jourdan fee Halzbos vs. Jacobinson	100.00
March	7	To C. G. Baxter fee Drs. Burgis and White case	100.00
Feb.	13	To D. M. Wilson fee Porter case	100.00
	13	To Spencer, Grayson & Spencer fee Cummings case	50.00
March	8	To E. L. Scarrett fee Singleton case	100.00
			<u>\$450.00</u>

1911.			
May	6	To balance on hand	\$1,529.68
			<u>\$ 1,979.68</u>

DR. NICHOLSON: I move that the report of the treasurer be received, but that we do not accept Dr. Welch's resignation. Seconded and carried.

DR. WELCH: I will say, gentlemen, that at our meeting last year it was found wise to place in the hands of the editor of our JOURNAL the secretaryship of the Association, and I think that if the office of treasurer would be placed in the same hands it would best serve the members and the JOURNAL. I believe in a concentration of power. I did this work at a time when the Association had nothing with which to pay its officers, and I can say that it takes a great deal of time, and I think that the work could be best done if thrown in with that of the secretary.

DR. BARNHART: I make a motion that we refuse to accept the resignation of the treasurer, and that we keep separate the offices of secretary and treasurer, and that the man who served so well the past twelve years be retained. And that this resignation be referred to the Council. Seconded and carried.

DR. WELCH: I shall insist on the Council electing a new treasurer, whether it be in the person of our worthy secretary or someone else, but I shall insist on being relieved from this work, as I feel I cannot take the time necessary for it.

The report of the secretary was read by Dr. E. J. Goodwin, as follows:

## REPORT OF THE SECRETARY.

Owing to the very efficient work of the former secretary, Dr. McAlester, the membership of the Association stands to-day at about the same number as last year, the figures being for last year 2,470 paid up; to-day there are 2,352 paid up members; add to this approximately 200 delinquents who will probably pay up before the end of the year and the numerical strength of the organization is 2,552. No large increase in the number of members may be looked for in future for there are less than 500 physicians in the state not now members who are eligible. In receiving new members county societies should scrutinize closely the ethical and professional standing of applicants, for the admission of a single person whose acts and ideas are not in harmony with the society's aims and objects will cripple the work of the entire local society. This warning is not sounded without good ground, for sev-

eral such persons have made strenuous efforts to join county societies, and being rejected they have aired their opinions of the members in language that was plain if not elegant. Our efforts therefore should be directed toward promoting a lively spirit of cooperative interest in the organization as a whole.

Notwithstanding the comparatively normal strength of the Association there are fourteen counties which have not remitted any dues for this year and two counties that remitted for only one or two members, showing that the county societies need attention. During the year I visited several county societies and had calls from others, but more urgent duties to the Association, especially in the legislative work, prevented my going.

Adair county society disbanded and surrendered its charter, but immediately reorganized with eight members and was granted a new charter. Dallas County made another unsuccessful effort to organize and with a little encouragement I believe a working society can be organized in that county. There are ninety-two county societies doing good work and some of the idle ones can be revived. Reynolds County was reorganized with eleven members and was granted a charter as it was learned that the previous organization had never applied for a charter.

Jasper County Medical Society has established a medical library as part of its activities; this makes three active medical libraries in the state.

The removal of the secretary's office to St. Louis and taking of full control of the JOURNAL by the Association has concentrated the work of these two departments in one office. The experiment of publishing the JOURNAL at our own expense and retaining the income from the advertisements has proved a success. Last year the JOURNAL cost the Association \$1,837.16 for printing, with no income from advertisements. This year it has cost for ten issues \$1,898.81; the income from advertisements for the same period has been \$1,525.82, making the net cost of printing and mailing of \$372.99, an average per month of \$32.29 as against \$161.43 per month last year. New advertising contracts now in force will decrease the average expense of future issues.

We are restricting advertisements of medicinal articles to those preparations that have been approved by the Council on Pharmacy and Chemistry and closely scrutinizing all other advertisements, hence there should be no surprise that our advertising pages are not more numerous. The prospects of making the JOURNAL a self-supporting proposition seem very encouraging.

I have taken charge of the exhibits as ordered at a previous meeting and will collect sufficient to defray all the expenses of the annual meeting. The restrictions on advertising apply also to exhibitors.

The reports of the committees on Public Policy and Legislation, the Committee on Tuberculosis and the President's message to the House were printed and sent to all delegates previous to the date of the meeting so they may be ready to act upon these reports without consuming too much time in the reading and discussion.

The County Secretaries' Association holds its third annual meeting this afternoon. Dr. Alexander R. Craig, Assistant to the Secretary of the A. M. A., is a guest of the Association and will address the Secretaries' meeting.

Respectfully submitted,

E. J. GOODWIN,  
Secretary.

On motion the report was received.

The Chair appointed the following nominating committee: Drs. E. H. Thrailkill, Kansas City; W. S. Allee, Olean; W. H. Breuer, St. James; D. C. Gore, Marshall; W. F. Nifong, Frederick-

town; M. O. Biggs, Bowling Green; E. C. Callison, Kirksville; T. J. Downing, New London; R. E. Donnell, De Soto; F. J. Lutz, St. Louis.

The election of delegates to the American Medical Association was the next order of business. The chair announced that the secretary of the Association, by virtue of an action of a former House was to be one of the delegates, hence only one delegate remained to be elected. The names of Dr. R. M. Funkhouser of St. Louis, Dr. J. D. Griffith of Kansas City, and Dr. A. R. Kieffer of St. Louis were placed in nomination and the ballot cast as follows:

Dr. Robert Funkhouser, St. Louis, 32; Dr. J. D. Griffith, Kansas City, 16; Dr. A. R. Kieffer, St. Louis, 4. Dr. Funkhouser was declared elected. The election of place of meeting for next year laid over to the next meeting of the House of Delegates.

Adjourned to Thursday morning at 9 a. m. in the Casino Hall.

### THIRD DAY, MAY 18

The House of Delegates was called to order by the president at 9:20 a. m. The Nominating Committee reported as follows:

The Nominating Committee begs leave to make the following report:

The officers to be nominated by this committee are the vice-presidents, seven councilors, and members of the committee on public policy and legislation, the committee on defense, and the committee on cancer. For these positions your committee nominates the following members:

Vice-presidents—W. J. Ferguson, Sedalia; J. H. Amerland, St. Louis; C. H. Lester, Kansas City; G. W. Vinyard, Jackson; J. M. Stone, Laredo.

Councilors—1st district, Dr. C. L. Evans, Oregon (reelected); 10th district, Dr. C. H. Dixon, Holliday; 14th district, C. T. Ryland, Lexington (reelected); 16th district, E. N. Chastain, Butler; 19th district, W. A. Clark, Jefferson City; 25th district, T. T. O'Dell, Ellington; 27th district, Lee Welch, Mountain View.

Committee on Public Policy and Legislation—Robert M. Funkhouser, St. Louis, chairman, three years; A. R. McComas, Sturgeon, two years; Jabez Jackson, Kansas City, one year.

Committee on Legal Defense—Joseph Grindon, St. Louis, chairman; W. B. Dorsett, St. Louis; Emmett P. North, St. Louis.

Committee on Cancer—Frank J. Lutz, chairman, six years; George Gellhorn, St. Louis, four years; Frank Hinchey, St. Louis, two years. And the committee recommends that thereafter one member of cancer committee be elected to serve two years.

Respectfully submitted,

THE COMMITTEE.

On motion the report was adopted.



Next order of business was to select the place of meeting for 1912. The following places were put in nomination:

Pertle Springs, Sedalia and St. Joseph. Dr. Gore of Marshall and Dr. Funkhouser of St. Louis were appointed tellers. After three ballots had been cast Sedalia obtained a majority of votes and was announced as the place of meeting next year.

The committee appointed to consider the resolutions from Jackson County Medical Society reported as follows:

After a careful canvass of the situation and a fuller survey of the field embraced by these recommendations, we, the committee, beg to report as follows:

1. No increase of annual dues to the State Medical Association is feasible or desirable at this time.

2. Our legal defense plans are as yet tentative and immature and we therefore suggest that the question of accumulating a surplus for reimbursing the members against whom damages have been assessed, be deferred for future consideration.

Signed,

W. H. BREUER,  
J. H. AMERLAND,  
WILLIAM NIFONG,  
J. F. WELCH,  
E. L. STEWART,  
J. Q. CHAMBERS.

On motion the report was adopted.

The report of the Judicial Council was read by the secretary, as follows:

#### REPORT OF JUDICIAL COUNCIL.

The Judicial Council desires to report that a committee of the Council audited the books of the treasurer and found the accounts correct. The books of the secretary were also examined by the committee and found correct. The Council recommends that the secretary be required to give a bond in the sum of one thousand dollars in view of the fact that he handles considerable sums in the conduct of the JOURNAL; also that the secretary's books be verified by a licensed accountant each year before the annual meeting.

Governor Hadley being in town in attendance upon the meeting of the Missouri Association for the Relief and Control of Tuberculosis of which he is president, was invited to address the Council upon a question in connection with the establishment and control of tuberculosis hospitals that may be erected by counties or groups of counties under the law recently passed by the Legislature. The Governor informed the Council of his desire to consummate a plan whereby the Missouri State Medical Association would act in an advisory capacity and perhaps in a supervisory capacity as to the expenditure of funds collected to establish such tuberculosis hospitals, and as to their control, the Anti-tuberculosis association to be an ancillary body of the State Medical Association in this work.

Upon motion it was decided that the consideration of this subject should be taken up in detail by the executive committee of the Council with a committee from the Anti-tuberculosis Association.

The Council recommends that the secretary be made the organizer for the Association under the direction of the executive committee.

In reference to the suggestions contained in the President's message the Council recommends:

1. That a committee of three members of the Council consider the recommendation looking to the establishment of a Home or Pension Fund for the benefit of indigent, infirm or aged physicians, their wives and widows.

2. That the Committee on Legislation be instructed to frame a suitable law to improve the county poor laws and the care of the inmates of poor houses as recommended by the President, and report to the Association in 1912, that the matter may be in shape to present to the Legislature in 1913.

3. That the secretary be instructed to request the State Board of Health to give more earnest and thoughtful attention to the subject of a single portal of entry to the practice of medicine, that all be put on an equal footing and the follower of any particular sect or cult be prevented from entering the practice of medicine with less preliminary and medical training than the average regular medical graduate.

4. That the executive committee of the Council take up with the Board of Health the question of employing an attorney by the Board in order that a higher power than the county attorney, acting under information given by resident physicians, may prosecute cases.

The officers elected by the Council are: Secretary and Editor, Dr. E. J. Goodwin; treasurer, Dr. J. Franklin Welch. Executive committee of the Council, Drs. F. J. Lutz, W. B. Dorsett and A. R. McComas.

Dr. Allee moved the adoption of the report. Seconded and carried.

On motion the House of Delegates adjourned *sine die*.

#### MINUTES OF THE JUDICIAL COUNCIL

The Judicial Council was called to order by the Chairman on May 16, at 2 p. m. The following councilors were present: Drs. C. L. Evans, L. A. Todd, G. W. Whitely, E. E. Parrish, James Hanks, W. B. Dorsett, A. R. McComas, J. D. Brummall, C. M. McConkey, F. E. Murphy, C. T. Ryland, S. G. Kelly, Frank DeVilbiss, F. J. Lutz, W. H. Breuer, A. H. Madry, R. L. Neff.

The treasurer's report was referred to an auditing committee composed of Drs. DeVilbiss, Breuer and Ryland.

The case of Dr. W. C. Dieckmann of Stoddard county was reopened and the documents referred to the following committee: Drs. McComas, Parrish and Hanks. The secretary informed the committee that Dr. Dieckman was present at the meeting and desired to be heard in his defense.

Dr. Breuer moved that a committee of three be appointed to consider the recommendations in the president's message, which carried and the following committee was appointed: Drs. Murphy, Madry and Todd.

Dr. Parrish detailed the conditions in Scotland county and explained that the old charter had been lost, as the secretary who had charge of it had died and it was not found in his effects. On motion it was ordered that a new charter be issued to Scotland County Medical Society.

Dr. Breuer said he believed Dallas County could be organized but it would require the assistance of the secretary who, he thought, should go to Dallas County and help the physicians organize. He moved that the Council recommend to the House of Delegates that the secretary be the organizer for the Association under the direction



of the executive committee. Seconded and carried.

The chairman read a communication from the American Medical Association relative to a plan under consideration to make all members of state associations on payment of dues in state associations.

Dr. A. R. Craig, assistant to the secretary of the A. M. A. was present and stated the plan was in contemplation, though no definite arrangement had yet been proposed, whereby membership in affiliated state associations would carry with it membership in the A. M. A.

Dr. Dorsett moved that the matter lie on the table until the meeting in 1912 and that the communication be printed in the JOURNAL as part of the records of the meeting. Seconded and carried. The communication follows:

NEW YORK, March 13, 1911.

DR. E. J. GOODWIN, Secretary,  
Missouri State Medical Association,  
St. Louis, Mo.

*Dear Doctor:*—At a meeting of the House of Delegates of the American Medical Association held in St. Louis, Wednesday, June 8, 1910, the following resolution was presented by Dr. Hubert Work, of Colorado:

WHEREAS, The plan of organization of the profession carried to its logical conclusion means that every member of a county society should be ipso facto a member of the American Medical Association, just as every member of a county society is ipso facto a member of a state society, and as it is the ultimate end of the plan that the American Medical Association should be coextensive with the organized profession throughout the land, and as nearly, if not quite, every state already has adopted the plan so far as making every member of a county society a member of a state society, therefore be it

*Resolved,* That the President appoint a committee to draw up details for extending the plan to the American Medical Association, and to present this plan to the various state societies for their consideration during the coming year, and to make a report at the next annual meeting of the House.

Dr. Alexander Lambert, of New York, moved as an amendment that the resolution be referred to the Board of Trustees because it means a separation of the JOURNAL from the membership in a manner which involves the finances of the Association.

The amendment was seconded, accepted, and the original motion as amended was carried.

The Trustees have given this matter full consideration, and at a meeting held in Chicago on Feb. 3, 1911, the following resolution was passed:

*Resolved,* That the Board of Trustees refer to the various state societies the question of the desirability of extending the plan of organization as represented in the foregoing resolution, and request that the various state societies take action on this matter and report to the Board.

In accordance with this last resolution I beg herewith to transmit the matter to your Society for consideration, and request that your report be sent to the Board of Trustees, American Medical Association, 535 Dearborn Avenue, Chicago, Ill.

Very truly yours,  
WISNER R. TOWNSEND,  
Secretary.

On motion adjourned to Wednesday morning at 10 o'clock.

WEDNESDAY, MAY 17

The Council was called to order by the chairman at 10:30 a. m.

The report of the auditing committee was read as follows:

We, your auditing committee, beg leave to report that we have examined the books, bills, receipts, bank statements, etc., of the treasurer, Dr. J. Franklin Welch, and find them correct.

We have also inspected the system of bookkeeping adopted by the secretary, Dr. E. J. Goodwin, and think it commendable.

We recommend that the treasurer furnish bond in the amount of \$4,000 and that the secretary furnish a bond to the amount of \$1,000.

We further recommend that the books of the secretary be examined by a licensed accountant once a year just preceding the annual meeting of the Association; the expenses of the bonds and the examination of the books to be borne by the Association.

FRANK DEVILBISS,  
W. H. BREUER,  
C. T. RYLAND.

On motion the report was adopted.

The committee appointed to hear the appeal of Dr. W. C. Dieckman from the action of the Stoddard County Medical Society reported as follows:

We, your committee to whom was referred the case from Stoddard County, beg leave to report as follows:

We have read the transcript sent up from Stoddard County Medical Society and have heard the statements of Dr. W. C. Dieckman, supported by affidavits in regular form.

We recommend that the action of the County Society be sustained.

We also recommend to the councilor of the twenty-third district that he use his best efforts to restore harmony in the Stoddard County Medical Society.

C. L. EVANS,  
JAMES HANKS,  
E. E. PARRISH,  
A. R. MCCOMAS.

On motion the report was adopted.

The committee appointed to consider the recommendations in the president's message reported as follows:

Your committee respectfully tenders its report upon the recommendations made by the President in his message to the House of Delegates at the opening session, as follows:

1. In the matter of the recommendation to establish a fund by increasing the annual dues, for the purpose of reimbursing doctors for verdicts against them in damage suits, when in the judgment of the defense committee the verdict is unjust, it was developed in the discussion of the matter that the House of Delegates has already referred this subject to a committee of its own, which committee is to report to the general session to-morrow morning. We have, therefore, taken no action upon this item in the recommendations.

2. We recommend that the Chairman of the Judicial Council at a convenient time, appoint a committee of three to consider the recommendation looking to the establishment of a Home or Pension Fund for the benefit of indigent, infirm and aged physicians, their wives and widows.

3. In the matter of the recommendation that better county poor laws be advocated, that a township trustee be authorized to employ a local doctor, the fee to be paid by the County Court, we recommend that the Chairman of the Judicial Council instruct the Committee on Legislation to frame a suitable law and report back to the Association at the meeting in 1912.

that the matter may be in shape to present to the Legislature in January, 1913.

4. In the matter of the recommendation that there be a single portal of entrance to the practice of medicine, that the Board of Health so arrange the examination of candidates for license to practice, that all are put on an equal footing, that the follower of any particular cult or sect be prevented from entering the practice with less of preliminary and medical training than the average regular graduate, we recommend that the Secretary be instructed to request the State Board of Health to give this matter even more earnest and thoughtful consideration.

5. In the matter of the recommendation that from the increased income of the State Board of Health the Board employ an attorney in order that a higher power than the County Attorney acting under information given by a resident physician, prosecute cases, we urge that the Chairman instruct the Executive Committee of the Judicial Council to take up the matter promptly with the State Board of Health, since this is a matter which appears to us to be of much importance.

Signed

FRANKLIN E. MURPHY,

A. H. MADRY,

L. A. TODD,

The Committee.

Dr. Breuer moved that the report of the committee be adopted. Seconded and carried.

The Chair called attention to the absence of a report from the publication committee and informed the Council that the executive committee had authorized the publication committee to enter into an agreement with the American Medical Association for printing the JOURNAL at the headquarters in Chicago on a basis advantageous to our Association.

Dr. DeVilbiss moved that the action of the publication committee in securing the services of the A. M. A. in printing the JOURNAL be endorsed. Seconded and carried.

Dr. Breuer moved that the Chair appoint a publication committee, two of its members to be members of the Council. Seconded. Dr. DeVilbiss moved to amend by making the committee consist of two members outside the Council and one member from the Council. Seconded and carried.

Dr. Whitely stated that conditions in Harrison County were in somewhat bad condition on account of the association with osteopaths by certain members of the county society and asked the advice of the Council.

It was recommended that the secretary be instructed to attend a meeting of the Harrison County society in company with Dr. Whitely and efforts made to bring harmony among the members.

The president, Dr. Pearse, being present, announced that a subject had been presented to him on which he desired the advice of the Council. He stated that Governor Hadley, who had been active in the work of conserving the public health and particularly in regard to the control of tuberculosis was in town and suggested that it would be proper to invite the Governor to address the Council, especially in view of the fact

that the Governor desired to bring about closer affiliation between the Missouri Association for the Relief and Control of Tuberculosis of which he was president and the Missouri State Medical Association.

Dr. E. W. Schauffler, a member of the Tuberculosis Association, also spoke in favor of asking the Governor to meet the Council and address the body in regard to his plans.

Dr. Murphy moved that the Governor be invited to address the Council at 3 o'clock. Seconded and carried.

On motion adjourned to 2 o'clock.

#### AFTERNOON SESSION

The Council came to order at 2 o'clock, Dr. Lutz in the chair.

The Chairman explained that Governor Hadley had something to say to the Council concerning a cooperative action between the Tuberculosis Association and the State Medical Association.

Governor Hadley said the new law which permitted counties and groups of counties to establish tuberculosis hospitals was a very important one and ought to be put in operation at the earliest moment. The Anti-Tuberculosis Association, he said, was an incohesive and general body without the definiteness that characterized the State Medical Association and he felt that the medical association could in some way take over this great public work so that there would be an assurance to the people that the expenditure of these public funds would be made in a satisfactory manner; he believed the people would have a greater degree of confidence that the funds collected would be properly expended if this was done under the supervision of the State Medical Association than if done in any other way, and he expressed the hope that some plan would be devised whereby the State Medical Association would assume a supervisory control of these funds and of the work of disseminating information for the relief and control of tuberculosis.

The Chair asked Dr. Schauffler if he had any plan to propose which would accomplish the purpose as outlined by Governor Hadley.

Dr. Schauffler said the matter had just been brought to his attention and he was not yet ready to submit any plan. He believed, however, that it would be to the advantage of both associations if the expenditure of the funds collected for the establishment of tuberculosis hospitals were expended under the supervision of the State Medical Association.

Dr. Homan believed the state board of health should have entire control of sanitary matters and the licensing power of the board divorced and put in the hands of a separate body with no other duties.

After some further discussion Governor Hadley suggested that the tuberculosis society could be made an ancillary body to the medical associa-



tion; that if such an affiliation between the two organizations existed the people who gave money to establish these hospitals would have a better assurance that the money was properly expended.

Dr. Nifong moved that the executive committee of the State Medical Association be instructed to confer with the Anti-Tuberculosis Association for the purpose of determining to what extent the collaboration of the two bodies can be brought about. Seconded.

Dr. DeVilbiss moved to amend the motion by making it read the executive committee of the Council. Seconded and carried.

The following officers were elected for the ensuing year:

Chairman of the Council, Dr. F. J. Lutz; secretary of the Council, Dr. E. J. Goodwin; treasurer, Dr. J. Franklin Welch; secretary of the Association and editor of *THE JOURNAL*, Dr. E. J. Goodwin.

The reports of the councilors follow:

First District, Dr. C. L. Evans, Oregon, Councilor.—The first district is harmonious and flourishing. It is perhaps superfluous to say "flourishing," for where harmony prevails the medical profession always flourishes. By counties I desire to report as follows: Holt county has a membership of 22; we have gained one member. There are three outlaws in the county. The society has held four meetings; five papers were read and a number of cases reported and discussed; the average attendance was fourteen. The principal reason for the harmony prevailing among the members is the adoption of a fee bill with articles of agreement that each member will adhere to it; this fee bill represents an increase of 50 to 100 per cent. over former ones.—Atchison county has a membership of fifteen; they lost one member by death. Dr. Abbott of Fairfax; there are only two outlaw physicians; meetings are held quarterly but the average attendance is only five; two papers were read and one meeting was devoted to clinical work, the others to reporting and discussion of cases.—Nodaway county has thirty-two members; there are twelve outlaws—too many by about a dozen; the society meets monthly with an average attendance of ten; six papers have been read and the members take a very lively interest in their work. There have been no suits for malpractice in this district.

Second District, Dr. L. A. Todd, St. Joseph, Councilor.—Buehnan-Andrew County Medical Society is the only one in this district. The year 1910 marked an era of progress, one of instructive work and growth of a spirit of harmonious activity. The post-graduate work was discontinued and the entire time given to reading of papers and holding clinics. Steps have been taken to establish a medical library and a weekly bulletin is published in which the program is printed and matters of interest to the members are published; the times of meeting have been changed from weekly to fortnightly. A committee on tuberculosis acts with the city board of health for the education of the people regarding the control and prevention of this disease. Resolutions were adopted urging the city officials to stop the sale and use of dangerous fireworks on the 4th of July; the Owen bill for a department of public health was endorsed and our senators notified; and the society used its best endeavors to prevent the passage of the optometry bill in our legislature. One meeting during the year was held at Savannah in Andrew county; one meeting was held at State Hospital No. 2 where an instructive clinic was given by the hospital staff. The committee on public health and legislation

referred the evidence taken in an alleged case of abortion by a member to the state board of health. The scientific work was above the average; four subjects were treated in symposiums, namely: Pregnancy, syphilis, tuberculosis, and the relation of pharmacology and chemistry to medicine, and several papers on public health questions were read.

Third District, Dr. G. W. Whitely, Albany, Councilor.—Gentry county has held two meetings during the year; three papers were read and one clinic held; the average attendance was five; we made efforts to meet with the District Medical Society in October but failed; the society has decided to meet quarterly and endeavor to have all members present.—DeKalb county makes no report and I have been unable to get them together at a meeting.—Worth county sent no report; we still have some members in that county but my repeated appeals for a meeting have been unavailing.—Harrison county is not meeting and affairs there are in bad shape; I have visited the county but could not get the members together. Our District Medical Society has not held a meeting for over a year, as I could not get the cooperation of the officers. So we are not doing much in my district.

Fourth District, Dr. Samuel Sheldon, Trenton, Councilor.—Mercer county has held but two meetings with an average of three in attendance; there are five members and eleven non-members, all eligible; this county needs attention. Grundy county has taken a new start and the outlook for good work this year is promising; they have a better organization than ever before and the largest membership in their history—nineteen; ten meetings have been held with an average of seven present and five papers read since January 1, 1911.—Sullivan county held a meeting on May 9, the first in two years; seven members attended, the interest was good and arrangements were made to meet every month; one member was sued for malpractice and compromised out of court for \$1,000; he was not defended by the State Association.

Fifth District, Dr. E. E. Parrish, Memphis, Councilor.—Schuyler county has made great improvement during the past year; meetings are held quarterly with an average of eight present; twelve papers were read and clinical cases presented.—Scotland county did not meet in the winter month on account of bad roads but some of the rural members cooperated with school teachers in their public meetings and gave talks on hygiene and sanitary matters; the society is planning to purchase a stereopticon and give illustrated lectures to the laity in conjunction with teachers' meetings; they look forward to a prosperous year in this county.—Clark county makes a poor report; they have a good membership, twelve, but produce nothing at their meetings which are scheduled for twice a year.

Sixth District, Dr. James Hanks, Brashear, Councilor.—Adair county is in a flourishing condition; they held twelve meetings with an average of eight members present; twelve papers were read and five clinics held; they prosecuted and secured a conviction against one "cancer specialist" for practicing medicine without a license and have preferred charges against a practitioner for guaranteeing cures in cancer cases; the past year has been the most profitable in the history of the society.—Knox and Lewis counties send no reports but conditions in both are far from satisfactory.

Seventh District, Dr. J. D. Smith, Shelby, Councilor.—Marion county is in good condition; they have held twelve meetings with an average of fifteen members present; five or six papers were read; in addition to the regular scientific meetings there have been a number of special meetings and both these and the regular meetings many questions of a business nature were under discussion; the society has taken great interest in public health matters and was specially active in supporting the school board in its effort to



compel vaccination of pupils and was successful in spite of much opposition and with the assistance of the state board of health in abating a severe epidemic of small-pox.—Ralls county has held only two meetings with twelve members present; four papers were read; notwithstanding the fact that so few meetings were held the society is holding together well.—Shelby county has a large and active membership; they held four meetings with nine members present; four papers were read and eight clinics held.

Ninth District, Dr. A. R. McComas, Surgeon, Councilor.—Audrain county has held twelve meetings with an average of six present; twelve papers were read and eight clinics presented.—Boone county with a large and influential membership is doing practically nothing; no meetings were held during the past year and little interest beyond retaining membership is manifested.—Callaway county is falling off; it is difficult to get the members together and only two meetings were held at neither of which was a paper read; two clinics were presented; there are more eligible physicians not members than there are members of the society.—Howard county is one of the best working county societies in the state although the secretary reports the interest not quite up to normal this year; they hold meetings monthly with one or more papers at each meeting and an average of ten members present.—Montgomery county is a fruitless organization; they met in December and elected officers, but none of them has paid dues to the State Association except the secretary; unfortunately he is about to move away and that will leave this county without representation; it needs immediate attention.

Eleventh District, Dr. J. D. Brummall, Salisbury, Councilor.—Carroll county has twenty-two members; has held four meetings with an average of seven present; five papers read and two clinics.—Chariton county has twenty-two members, has held eight meetings at which five papers were read and two clinics held.—Linn county has thirty-one members, held four meetings with an average of ten members; eight papers were read and one clinic held.—Livingston county has eighteen members, held six meetings with eight present; eight papers were read and two clinics. There were no malpractice suits in this district; about one-third of the physicians do not belong to the society, but a large proportion of them are too old or not eligible; the others are largely newly-arrived and not yet joined. There is a diminishing number of practitioners in the district.

Twelfth District, Dr. C. M. McConkey, Lathrop, Councilor.—Platte county is in flourishing condition; meetings are held monthly with an average of seven present; twelve papers were read and six clinics presented; there are only four physicians not members.—Caldwell county reports conditions in fairly good shape; meetings are held quarterly with fair attendance and scientific work of a good order; there are twenty-four members and four non-members.—Davies county is in excellent condition and the interest in society work is increasing; they held five meetings with ten present; ten papers were read and twenty-four clinics presented.—Ray county is in a prosperous condition with nineteen members; meetings are held bi-monthly and the average attendance has been fifteen; one paper has been read at each meeting; there are about eleven eligible physicians not members.—Clay county is doing splendidly; meetings are held monthly, alternately at Liberty and Excelsior Springs; the average attendance was ten; the number of papers read twenty-six and five clinics presented; the society is taking active steps to rid the county of the numerous quacks and charlatans; the fraternal feeling is commendable and is being maintained.—Clinton county has held but two meetings; the attendance averaged eight members and seven papers were read; two clinics were presented; Dr. H. C. Crowell of Kansas City, was a guest at one of the meetings and read a

very instructive paper on "Perfected Surgery"; two members have been sued for malpractice; they are being defended by the State Association, the cases not yet decided.

Fourteenth District, Dr. C. T. Ryland, Lexington, Councilor.—Lafayette county has held five meetings with an average of eight members present; six papers were read and two clinics presented.—Saline county is doing practically nothing; two meetings were held but no program carried out and nothing accomplished; it is extremely difficult to get the members together as they do not seem to realize the value to themselves of such gatherings; a number have failed to pay their dues this year and interest is at a low ebb.—Cooper county has held seven meetings with an average of five members present and no papers read; three clinics were presented; the members will not prepare papers nor can they be persuaded to study the post-graduate course; the outlook for the balance of this year seems a little brighter as the dentists and druggists have been invited to affiliate with the society and several of them have responded. The profession is badly in need of something to bring about a better understanding of organization objects.

Sixteenth District, Dr. J. R. Buchanan, Nevada, Councilor.—Barton county has held four meetings with an average of ten present; four papers were read and three clinics presented; the interest in the society work is gratifying and they expect to do even better during this year.—Vernon county has practically every eligible physician in the county on its rolls; they have held nine meetings; read ten papers, and manifested an interest in society work generally.—Bates county holds meetings monthly the average attendance being nine; eleven papers were read and three clinics presented; they have thirty-one members and are capable of doing even better work.

Seventeenth District, Dr. S. G. Kelly, Sedalia, Councilor.—Benton county has not done much work this year; only three meetings were held at each of which eight members attended; three papers were read and two clinics presented. This county should do much better work.—Pettis county is supposed to hold meetings every two weeks from October to June, but the report does not show how many meetings were held; at such meetings as were held ten papers were read; this is too large a society and numbers too many men of good ability to do so little work, but how to stimulate them is a question I have not solved.—St. Clair county is practically dead; no meetings have been held for a year or more and no dues have been paid this year.—Henry county is doing well; they have held ten meetings with an average of nine present; eleven papers were read and from two to five clinical cases reported at each meeting; there are thirty-two active members and about twelve eligible physicians in the county.

Eighteenth District, Dr. Frank DeVilbiss, Tipton, Councilor.—Miller county holds quarterly meetings at which the interest is good; the average attendance has been eight; the number of papers read eight and two clinics were presented; there are only three eligible physicians in the county not members.—Moniteau county held a meeting every quarter during the past year and one public meeting; the average attendance at the regular meetings was ten; the number of papers read seven, and five clinics presented; one member has been sued for malpractice; he is being defended by the State Association and the case is still pending; the work of the society has been satisfactory.

Nineteenth District, Dr. Gustav Ettmueller, Jefferson City, Councilor.—Not much can be said in praise of Cole county; only three meetings were held at which a quorum was present; nine times there was no quorum; the society has elected new men to office every year hoping to find the right man to inject life into it, but the interest and attendance have gone from bad to worse.—In Hermann, Gasconade county, the

conditions are very, very bad: the people suffer because of the ill-feeling between the physicians and the profession is brought into disrepute. The Gasconade-Osage-Maries county society is in a flourishing condition: the members are enthusiastic and many papers are read and discussed.

Twentieth District, Dr. F. J. Lutz, St. Louis, Councilor.—St. Louis Medical Society is doing a great deal of excellent work; the officers are energetic, the interest in the meetings well sustained and the programs of a character to appeal to the majority of the members; the total paid-up membership is 731; there were sixty-eight meetings with an average attendance of eighty; number of papers read, eighty-seven, and twenty-four patients presented; at nineteen of the meetings illustrated lectures were delivered and twenty-three specimens were presented for examination; the society has taken an active interest in public health matters and cooperated with public officials in an effort to create sentiment in favor of a safe and sane 4th of July.—Franklin county has held but two meetings; the average attendance was 8; six papers were read and two clinics presented; the membership has fallen off somewhat as there are several delinquents.

Twenty-first District, Dr. G. M. Rutledge, Ste. Genevieve, Councilor.—Ste. Genevieve is the only county to report in this district; this county has held only four meetings with the small average of four members present; only two papers were read; interest seems to be lagging.—The entire district seems to need active work to bring the members into more favorable relation with the State Association.

Twenty-second District, Dr. W. S. Hutton, Fomfelt, Councilor.—Madison county could make no report of its work as the records were destroyed by fire and the secretary was unable to give the particulars.—Cape Girardeau county has good material for active work, but the secretary reports that they have not done the work they should have accomplished; they have held ten meetings at which the average attendance was seven; fifteen papers were read; there are a number of eligible physicians in the county who have been solicited to join but thus far without success.—Mississippi county has evinced a reasonable amount of interest in the writing of papers but they did not tax their energies to produce much good work; cases have been presented and discussed from time to time; the secretary made efforts to induce them to study the post-graduate course, but without success; he then followed the plan of suggesting a subject to the member appointed to read a paper and a few acted upon this; this year he is asking each essayist to select his own subject, but the results are not very gratifying.—Scott county held four meetings last year but accomplished little as no papers were read; still the discussions of cases were interesting; four separate attempts to hold open meetings each of which was a failure on account of inclement weather, rather discouraged further efforts in this direction; the outlook for this year is encouraging and good work is expected.

Twenty-third District, Dr. T. C. Allen, Bernie, Councilor.—Stoddard county is doing very satisfactory work; six meetings were held at which twelve papers were read and four clinics presented; the average attendance was twelve; there are four delinquent members and about fifteen eligible non-members.—Pemisot county is showing considerable improvement in their work; they had an average attendance of ten at the three meetings held last year; no papers were read but two clinics were presented and case reports brought out interested discussions; there are about fourteen eligible non-members in the county.—New Madrid county holds meetings quarterly and an average of five attended; no papers were read; six cases were presented and discussed and interest in the work is good; Dr. Joseph Grindon of St. Louis visited the society and addressed a public meeting which resulted in much good; he also addressed the society upon the

advantages of organization and close affiliation with the State Association.

Twenty-fourth District, Dr. T. W. Cotton, Van Buren, Councilor.—This society holds its meetings subject to the call of the president—about every ninety days. Its meetings have been fairly well attended; they have held several public meetings and these were well attended by the public; the subjects discussed dealt with infectious diseases and sanitation and particular interest was manifested by teachers in the public schools.—Ripley county has held no meeting since I have been councilor of the district; several attempts to get the physicians together and reorganize the society have failed and nothing short of a personal visit will accomplish anything; this, however, I have hesitated to attempt until assured that sufficient interest was manifest to bring good results.—Butler county has an active society that holds regular meetings and is doing good work.—Wayne county is practically lifeless and no members have paid this year. On the whole this district is in better shape than a year ago, but it is not yet doing the work that we should like to see it do.

Twenty-sixth District, Dr. W. H. Brenner, St. James, Councilor.—Only one county sent report of its work, Phelps county. That county has held twelve meetings with an average of seven members present; twenty-eight papers were read and fifty-three cases presented; the society is in a flourishing condition and professional relations excellent.—Dallas county has made several attempts to form an organization but unsuccessfully. I believe a good working society can be established there and suggest that the secretary be instructed to assist in this work.—The other societies in this district are doing little or nothing and need the active attention of an organizer.

Twenty-seventh District, Dr. H. C. Shuttee, West Plains, Councilor.—Howell county is doing fairly good work; they held ten meetings at which an average of ten members attended. The other counties in this district are not organized.

Twenty-ninth District, Dr. A. H. Madry, Aurora, Councilor.—Greene county has held twenty meetings since last report and eighteen has been the average attendance; seventeen papers were read; two members have been sued for malpractice, one is being defended by the State Association; the other compromised his suit without giving the State Association a chance; the papers have as a rule been of a high order, showing study and care in their preparation and eliciting discussions that provoked further study; the society has the esteem and confidence of the people and commercial organizations and has been of considerable service to the city of Springfield in suggesting improvements in the sanitary conditions, especially of the water-supply.—Christian county did not have a successful year; this year we are planning to do better; we intend to have a called meeting in June for the purpose of stirring up a better interest among the members.—Webster county holds meetings quarterly and has had an average of twelve at each meeting; sixteen papers were read; they are trying to get Wright county physicians to join through Webster and hyphenate the two counties; the prospects look favorable; there are still some unlicensed physicians practicing in Webster and the members are making efforts to stop them.—Polk county reports considerable difficulty in keeping up the interest of the members; three meetings have been held, four papers read and three clinics presented; there are fourteen members and an equal number of eligible non-members in the county.—Barry county seems to be at a standstill; although they have fifteen members paid-up no meetings have been held and interest in the work is nil.—Lawrence-Stone county is in splendid condition; they meet quarterly, have an average attendance of ten and read twenty papers at their meetings; ten clinical cases also were presented. A special tuberculosis clinic



held at the State Sanatorium was very instructive and most interesting. The society received a cordial welcome from the Board of Managers which was highly appreciated by the members who gave evidence of their earnest desire to do all in their power to aid this great institution to attain its highest possible degree of usefulness; the society also expressed itself as wishing that partisan politics might be eliminated as far as possible from the management of this and all state eleemosynary institutions; and also declared itself in favor of paying a suitable salary to high-class men in charge of the institution believing that the state needs men specially trained and competent to conduct these institutions for the best good of the inmates and such men are not obtainable when the salaries are stinted and inadequate. The society lost a valuable and energetic member in the death of Dr. J. B. Fleming.—Taney county held four meetings with an average of five members present; four papers were read and one clinic presented; the membership is small and scattered and the society is to be commended for its good work under very adverse conditions; one member moved to Oklahoma and it is likely that another may withdraw on account of age—their venerable ex-president, Dr. J. P. Compton; the records of the society were destroyed in a fire that destroyed the drug store of the former secretary, Dr. Burdette.

On motion adjourned *sine die*.

#### MINUTES OF THE GENERAL SESSIONS

FIRST DAY—TUESDAY, MAY 16, 1911

##### CASINO HALL

The meeting was called to order at 8:30 p. m. by the first vice-president, Dr. W. T. Lindley of Hamilton, who introduced the president, Dr. Herman E. Pearse of Kansas City.

Dr. Pearse read his address entitled, "The Things that Are Done and the Things that Need Doing."

The orator on medicine, Dr. E. H. Miller of Liberty read a paper entitled, "Our Rural Schools."

The orator on surgery, Dr. Robert M. Funkhouser, of St. Louis, read a paper entitled, "The Diagnostic Significance of Abdominal Pain."

Refreshments were served following the program by the Ladies' Entertainment Committee of Kansas City.

SECOND DAY—WEDNESDAY, MAY 17, 1911

##### CASINO HALL—MORNING SESSION

The meeting was called to order at 9:30 a. m. by the president, Dr. Herman E. Pearse. Dr. Funkhouser, St. Louis, acting secretary.

The report of Committee on Necrology was read by Dr. J. E. Harris, chairman of the committee.

The scientific program consisted of the following papers:

"Symposium on Exophthalmic Goiter"—Diagnosis, by Dr. W. W. Graves, St. Louis; pathology, by Dr. R. L. Thompson, St. Louis; treatment, by Dr. Willard Bartlett, St. Louis.

"Thyroid and Parathyroid Glands." by Dr. Charles Geiger, St. Joseph.

"Indications for the Use of the X-Ray in Goiter," by Dr. J. N. Scott, Kansas City.

"Diagnosis of Rabies," by Dr. D. L. Harris, St. Louis.

"Blindness Following Administration of Organic Arsenic," by Dr. A. W. McAlester, Jr., Kansas City.

On motion meeting adjourned to 8:30 p. m.

##### EVENING SESSION

The meeting was called to order at 8:45 p. m. by the president, Dr. Pearse.

The scientific program consisted of the following:

"Pathology of the Rectum in Diagnosis and Treatment: Illustrated with Lantern Slides," by Dr. W. H. Stauffer of St. Louis.

"Anterior Poliomyelitis: Its Diagnosis: Illustrated with Lantern Slides," by Dr. E. Sanborn Smith, Macon.

"A Differential Study of Multiple Benign Cystic Epithelioma and Adenoma Sebaceum in the Negro: Illustrated with Lantern Slides," by Dr. Richard L. Sutton of Kansas City.

"The Operability of Uterine Cancer: Illustrated with Lantern Slides," by Dr. F. J. Tausig of St. Louis.

"Division of Fees," by Dr. J. B. Taulbee of Joplin.

"Early Care of Acute Abdominal Conditions," by Dr. W. T. Conghlin, St. Louis.

"On Certain Symptoms which are Frequently Unrecognized as Being Indicative of Disturbances of the Prostate and Verumontanum," by Dr. John R. Caulk of St. Louis.

The papers of Dr. H. E. Songer, Jamesport, and H. F. Parker, Warrensburg, were read by title.

Adjourned at 11 p. m.

GENERAL SESSION, MAY 18, 1911

##### CASINO HALL

Meeting called to order by the president, Dr. Pearse, immediately after adjournment of the House of Delegates at 10:15 a. m.

The first order of business was the election of the president for the ensuing year. The president appointed as tellers: Drs. D. C. Gore, of Marshall; R. M. Funkhouser, St. Louis; E. G. Blair, Kansas City, and J. Franklin Welch, Salisbury. The nominating ballot resulted as follows:

Dr. Robert H. Goodier, Hannibal, 111 votes; Dr. C. M. Nicholson, St. Louis, 28; Dr. C. R. Woodson, St. Joseph, 10; Dr. R. M. Funkhouser, St. Louis, 4; Dr. Phillip Skrainka, St. Louis, 2; Dr. T. E. Potter, St. Joseph, 2; Dr. O. G. Gleaves, St. Joseph, 1; Dr. George Homan, St. Louis, 1; Dr. C. Lester Hall, Kansas City, 1.

On motion of Dr. D. C. Gore, seconded by several, the rules were suspended and the secretary



was instructed to cast the vote of the Association for Dr. Goodier for president.

The president appointed Drs. C. R. Woodson and C. M. Nicholson to conduct Dr. Goodier to the platform, and Dr. Goodier was duly installed as president.

Dr. Goodier in a few words of appreciation thanked the Association for the honor conferred on him and asked the members to give him their cooperation and support in directing the affairs of the Association during the year; and took charge of the meeting.

The next order of business was the election of orators.

Dr. Funkhouser nominated Dr. C. R. Woodson of St. Joseph for oration on medicine. The nomination was seconded by Dr. Nicholson and on motion nominations were closed and Dr. Woodson was declared unanimously elected.

Dr. Grindon nominated Dr. C. M. Nicholson of St. Louis for orator on surgery. Seconded by Dr. C. M. Wallace, and on motion Dr. Nicholson was elected unanimously.

The report of the Committee on Ophthalmia Neonatorum was read by Dr. C. W. Gosney.

On motion the report was adopted.

Dr. Funkhouser moved that a vote of thanks be extended to the retiring president for his able conduct of the affairs of the Association and for his impartiality and uniform courtesy in his rulings during the session. Seconded and carried unanimously.

Dr. Funkhouser moved that a vote of thanks be extended to the citizens of Kansas City, the members of the Jackson County Medical Society for their hospitality, kindness and courtesy to the members; also to the managers of the Coates House for the use of their rooms for meetings. Seconded and carried.

The report of the Committee on Medical Education was read by Dr. C. Lester Hall.

Dr. Funkhouser moved that the report be received and adopted, which was duly seconded. After considerable discussion the report was adopted.

On motion adjourned to 2 o'clock.

### THIRD DAY, MAY 18

#### CASINO HALL

Meeting was called to order at 2:15 p. m. by Dr. Goodier, newly elected president.

The report of the Committee on Public Policy and Legislation was read by Dr. R. M. Funkhouser, chairman.

On motion the report was adopted.

The report of the Committee on Tuberculosis was read by Dr. E. W. Shauffler, chairman.

On motion the report was adopted.

The following resolution was introduced by Dr. Joseph Grindon:

WHEREAS, The experience of all communities has proved that universal vaccination is the only efficient preventive of small-pox, and,

WHEREAS, Many of our School Boards, recognizing this fact, have ruled that all unvaccinated children must submit to vaccination prior to enrollment, and,

WHEREAS, Suit has been threatened against the School Board of Hannibal, and actually filed against the School Board of St. Louis to compel the admission of unvaccinated children to the public schools, therefore, be it

*Resolved*, That the Missouri State Medical Association unqualifiedly endorses the action of the above and other School Boards in reference to compulsory vaccination of school children and through its Committee on Public Policy and Legislation stands ready to offer to these school boards information pertinent to the question of compulsory vaccination which may be of assistance to the school boards in defense of these suits, and, be it further

*Resolved*, That a copy of these resolutions be transmitted to the School Boards of Hannibal and St. Louis.

On motion of Dr. Schlueter the resolution was adopted.

Dr. Funkhouser introduced the following resolution:

WHEREAS, It is desirable to reestablish the third and fourth years of the medical department of the University of Missouri, therefore, be it

*Resolved*, That the Missouri State Medical Association will cooperate with the Board of Curators of the State University in any plan the board may devise to consummate this end in accord with the standards of modern medical education; and will give such assistance as may be in the power of the Association to obtain sufficient funds from the Legislature to maintain the full course in medicine.

On motion the resolution was adopted.

The scientific program was then taken up and the following papers read:

"Symposium on Retrodeviation of the Uterus"—Etiology, by Dr. O. Hoffman, Kansas City; diagnosis, by Dr. George Gellhorn, St. Louis; treatment, by Dr. O. Beverly Campbell, St. Joseph.

Discussion by Drs. Belove, Crowell, Hertzler, C. Lester Hall, Sommer, Reynolds; Drs. Hoffman, Gellhorn and Campbell closing.

"Report of Committee on Cancer"—Surgical treatment, by Dr. A. E. Hertzler, Kansas City; non-surgical treatment, by Dr. Joseph Grindon, St. Louis.

Discussion by Drs. Crowell, J. N. Scott; Dr. Grindon closing.

The following papers were read by title:

"Clinical Deductions in the Study of Tuberculosis, Paper No. 2," by Dr. William Porter, St. Louis.

"Puerperal Infection," by Dr. W. R. Beatie, Marshfield.

"Function of the Ductless Glands," by Dr. C. W. Watts, Fayette.

"Physical Movements of Man an Index to His Mental Status," by Dr. T. F. Lockwood, Butler.

Dr. C. B. Hardin of Kansas City introduced the following:

I wish to recommend to the Committee on Scientific Program a plan to change the getting up of programs so as to supervise essays and reports of a scientific nature intended to be read before this body, and have full power to accept or reject such at its own discretion. If such change requires any modification of the by-laws such change can be introduced at the next meeting of the Association. Our Association is so large that the yearly programs have become too crowded with papers for each and all to receive merited attention and discussion.

By a ruling during this session on account of the crowded program the discussion of papers has been somewhat eliminated. This was because of an urgent though unfortunate necessity. By rendering the duties of essayists somewhat competitive by a previous examination of the manuscripts offered to the scientific committee, such applicants as pass scrutiny become honorably and scientifically recognized, and it hence would become a deserved compliment to the successful ones. We wish to compliment all who have added to our program of the present meeting, and we feel sure that they would have been received by the scientific committee.

If the above suggestion or recommendation be adopted, it will eliminate the necessity of sacrificing the time of the meeting to papers made up largely of compilations without the semblance of originality. We are not intending to intimate that any such instances have occurred heretofore in this Association, but there is a possibility of such occurring at every meeting henceforth in this Association.

The demand at this time of higher education would seem to require such a change.

The Scientific Program Committee can have, and should have, sufficient time before the oncoming meeting of the Association to notify those expected to read papers, etc., and to examine either abstracts or the entire productions at their discretion.

Dr. Grindon moved that the resolution be referred to the Committee on Scientific Work with instructions to report on it to the House of Delegates in 1912. Seconded and carried.

On motion adjourned at 5:10 p. m. *sine die*.

## MEDICAL SECTION

TUESDAY, MAY 16, 1911

The Medical Section was called to order at 2:15, Dr. Joseph Grindon in the chair. The secretary, Dr. C. H. Dixon, being absent, the chair appointed Dr. Marsh Pitzman, St. Louis, to serve as secretary *pro tem*.

The following papers were read:

"Extragenital Chancre," by Dr. John W. Marchildon, St. Louis.

"Treatment of Cardiospasm; With Demonstration on Patient," by Dr. Jesse S. Myer, St. Louis.

Discussion by Dr. O. H. Brown, St. Louis; Dr. Myer closing.

"Recent Studies in Eclampsia," by Dr. George C. Mosher, Kansas City.

"Dietetics in Infancy," by Dr. Jules M. Brady, St. Louis.

"Buttermilk as an Infant Food," by Dr. Frank C. Neff, Kansas City.

The discussion on the two preceding papers was participated in by Drs. Broderick, Beatie, Merrell and Kyger; Drs. Brady and Neff closing.

"Cutaneous Blastomycosis with Partial Report of Three Hitherto Unpublished Cases," by Dr. William Frick, Kansas City.

Discussion by Dr. Joseph Grindon, St. Louis.

"The Cornelius Treatment for Peripheral Nerve Diseases; With Report of a Case," by Dr. Elizabeth Bentele, St. Louis.

Discussion by Drs. Bliss, Skoog, W. W. Graves, and Dr. Bentele in closing.

"Etiology and Treatment of Dementia Præcox," by Dr. G. Wilse Robinson, Kansas City.

Discussion by Drs. Skoog and Graves; Dr. Robinson closing.

"Analysis of a Case of Hysterical Monoplegia," by Dr. A. L. Skoog, Kansas City.

Discussion by Dr. Graves; Dr. Skoog closing.

On motion the meeting adjourned at 6:30 p. m. to meet at 1:30 Wednesday afternoon.

WEDNESDAY, MAY 17

The meeting was called to order at 1:30 p. m. by the chairman, Dr. Grindon.

The following papers were read:

"Chronic Arterial Hypertension and Its Relation to Cardiovascular and Renal Diseases," by Dr. Geo. W. Goins, Breckenridge.

"Intermittent Limp," by Franklin E. Murphy, Kansas City.

Discussion by Dr. Geo. W. Goins; Dr. Murphy closing.

"Report of a Neurological Case of Obscure Etiology: Treatment and Recovery," by Dr. Orville H. Brown, St. Louis.

Discussion by Drs. A. L. Skoog, W. W. Graves, C. R. Woodson, J. M. Brady; Dr. Brown closing.

"The Use of Diet Rich in Carbohydrates in the Treatment of Diabetes Mellitus," by Dr. W. P. Elmer, St. Louis.

Discussion by Drs. Leeper of Bramer, Richardson of Kansas City; Dr. Elmer closing.

"The Diagnosis of Chronic Pancreatitis," by Dr. Charles C. Conover, Kansas City.

"The Country Doctor," by Dr. H. M. Clarke, Platte City.

"Tonsillectomy: With Presentation of Specimen Removed by the Author's Method," by Dr. Greenfield Sluder, St. Louis.

Discussion by Drs. Barclay, St. Louis; Scholz, St. Louis; Hornback, Hannibal; Shelton, Chillicothe; Hal Foster, Kansas City; Miller, Kansas City; Dr. Sluder closing.

A recess of five minutes was allowed for the members to examine the specimens presented by Dr. Sluder.

"Some Practical Problems in Ear, Nose and Throat Practice," by Dr. Robert Barclay, St. Louis.

Discussion by Drs. Miller, Kansas City, Hal Foster, Kansas City; Dr. Barclay closing.

"Menace to Eyesight from Trachoma," by Dr. John Green, Jr., St. Louis.



Discussion by Drs. Kelly, Sedalia; Luedde, St. Louis; Graves, St. Louis; Dr. Green closing.

It was moved that the chair appoint a committee of three oculists to gather data concerning the prevalence of trachoma in this state and submit the information to the county societies with the request that they lay the matter before local school boards; committee further to report at the 1912 meeting of this section and also ask the officers of county societies to urge their members of the General Assembly of Missouri to act on the matter. The result of the work of the committee to be presented to the General Session of this Association at its meeting in 1912 with the recommendation that proper steps be taken to bring about reform in the control of this disease.

The motion was seconded and carried.

"Circulatory Phenomena in the Eye," by Dr. W. H. Luedde, St. Louis.

Discussion by Drs. Green, Graves and Luedde of St. Louis.

"Disease of the Eye an Index to Constitutional Diseases," by Dr. C. W. Watts, Fayette. Read by title.

"Etiology and Treatment of Acute Insanity," by John D. Seba, Bland. Read by title.

The election of officers for the ensuing year resulted as follows: Chairman, Dr. G. Wilse Robinson, Kansas City; vice-chairman, Dr. John Green, Jr., St. Louis; secretary, Dr. S. G. Kelly, Sedalia.

On motion adjourned *sine die*.

#### SURGICAL SECTION

TUESDAY, MAY 16, 1911

COATES HOUSE

The meeting was called to order by the chairman, Dr. Arthur E. Hertzler, at 2:30 p. m.

The scientific program consisted of the following:

"Symposium on Obstructions of the Urinary Tract"—"Obstruction of the Male Urethra," by Dr. Henry J. Scherk, St. Louis; "Obstructions of the Upper Urinary Tract," by Dr. Jacob Bloek, Kansas City.

Discussion by Drs. R. M. James, Jabez N. Jackson, C. E. Burford; Drs. Scherk and Bloek closing.

Dr. E. G. Mark presented a specimen of urethral papilloma.

"Rupture of the Urinary Bladder Associated with Fracture of the Pelvic Girdle: Report of a Case," by James P. Henderson, Kansas City.

"Venous Anesthesia," by Dr. Gustave A. Lau, St. Joseph.

"Rebreathing in Ether Administration with Special Reference to the Carbon Dioxid Content," by Dr. William E. Leighton, St. Louis.

Discussion by Drs. Stephens, H. J. Scherek and Dr. Leighton closing.

"Report of Two Cases of Tubal Pregnancy," by Dr. F. G. Nifong, Columbia.

Discussion by Drs. Potts, C. Lester Hall, Funkhouser, Binnie, and Dr. Nifong closing.

"Carcinoma: With Special Reference to Carcinoma of the Lip," by Dr. T. E. Potter, St. Joseph.

Discussion by Drs. Binnie and Reynolds.

On motion adjourned at 5 p. m.

WEDNESDAY, MAY 17, 1911

CASINO HALL

The meeting was called to order at 2:15 p. m. by the chairman, Dr. Arthur E. Hertzler. The minutes of previous meeting were read and approved.

The scientific program consisted of the following:

"Intestinal Obstruction," by Dr. W. T. Reynolds, Kansas City.

Discussion by Drs. Funkhouser and Dandurant; Dr. Reynolds closing.

"Intestinal Obstruction: Report of a Rare Case," by Dr. C. M. Nicholson, St. Louis.

"Analysis of Fifty-Nine Cases of Acute Intestinal (Mechanical) Obstruction," by Dr. John Y. Brown, St. Louis.

Discussion by Drs. Sharpe, Reder, Barnes, Beedle, Chas. Geiger, O. Beverly Campbell; Dr. Brown closing.

"Personal Observations in the Treatment of 136 Consecutive Cases of Uterine Myoma," by Dr. Walter B. Dorsett, St. Louis.

Discussion by Drs. Crowell, Chas. Geiger, C. Lester Hall, Taussig, Funkhouser, Kieffer; Dr. Dorsett closing.

"Joint Tuberculosis: With Special Reference to the Use of Formalin and Glycerin Injections," by Dr. Roland Hill, St. Louis.

"The Abdominal Wall in Obese Subjects: Its Care after Abdominal Section," by Dr. Frances Reder, St. Louis.

The election of officers of the section for the ensuing year resulted as follows: Chairman, Dr. O. Beverly Campbell, St. Joseph; vice-chairman, Dr. W. T. Reynolds, Kansas City; secretary, Dr. Luther A. Todd, St. Joseph.

On motion adjourned.

#### REPORT OF THE COUNCIL ON MEDICAL EDUCATION

During the past few years there has been in this country a remarkable movement in favor of higher standards of medical education. Some of the medical schools in Missouri have led in this movement; while others, unwilling or unable to make the necessary improvement, have lagged behind. It is for many reasons the duty of the medical profession to encourage and support in every way possible those schools which are striving to uphold the highest standards. In order that the profession may have reliable information concerning the various schools of the State, the report this year will include the available data, chiefly from

official sources. In general, the aim will be to publish briefly the essential facts from which the reader may draw his own conclusions.

The various medical (and "near-medical") schools of the state are included in the following Table I, indicating their location, classification and attendance during the session of 1910-11 (according to affidavits made to the Missouri State Anatomical Board):

TABLE I  
Missouri Schools of Medicine, Etc.

Name of School	Location	Classification	Attendance 1910-11
American Medical Coll. . .	St. Louis	Regular	60
Barnes Medical College. . .	St. Louis	Regular	219
College of Phys. & Surgs. . .	St. Louis	Regular	47
St. Louis Univ. Med. Sch. . .	St. Louis	Regular	280
Wash'ton Univ. Med. Dept. . .	St. Louis	Regular	127
Cent. Coll. of Osteopathy. . .	Kans. City	Osteopathic	40
Eclectic Medical Univ. . .	Kans. City	Eclectic	41
Hahnemann Med. Coll. . .	Kans. City	Homeopathic	42
University Medical Coll. . .	Kans. City	Regular	139
Postgraduate Med. Sch. . .	Kans. City	Regular	20
Ensworth Medical Coll. . .	St. Joseph	Regular	56
Univ. of Mo. Sch. of Med. . .	Columbia	Regular	39
Am. School of Osteopathy. . .	Kirksville	Osteopathic	629
Weltmer Inst. of Sug. Ther. . .	Nevada	Psycho-ther.	50

As shown in the preceding table, there are at present in Missouri eleven medical schools, in the stricter sense, including nine regular schools, with a total attendance of 987 students, one eclectic school with forty-one students, and one homeopathic school with forty-two students. In addition, there are two osteopathic schools, conferring the degree D.O. (Doctor of Osteopathy) with a total of 669 students in attendance; and one school of suggestive therapeutics, conferring the degree S.T. (Suggestive Therapist), with an attendance of fifty students.

With reference to the medical schools proper, with which at present we are primarily concerned, the question arises as to their relative merits. How many are properly equipped to teach medicine successfully according to modern standards? Let us first consider the ratings of the Council on Medical Education of the American Medical Association, an authoritative and disinterested body which represents the entire profession. This Council, which has done an immense amount of work for the betterment of medical education, has investigated fully the various medical schools in the United States and has rated them according to their apparent merits. To be rated as an "acceptable" medical school the following very reasonable minimum requirements must be met: (1) entrance requirement of four-year high school course, or equivalent; (2) four years' graded course of study, at least thirty weeks each year, including two years' work in thoroughly equipped laboratories and two years' clinical work with adequate hospital facilities. The colleges are rated according to their equipment and facilities, together with other evidence as to the efficiency of their teaching. The rating is given in the following Table 2:

TABLE II.—RATING OF THE MEDICAL COLLEGES OF MISSOURI BY THE COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

CLASS A.—ACCEPTABLE MEDICAL COLLEGES

St. Louis University School of Medicine.  
University Medical College, Kansas City.  
University of Missouri School of Medicine (two-year course).  
Washington University Medical Department.

CLASS B.—MEDICAL COLLEGES NEEDING CERTAIN IMPROVEMENTS TO MAKE THEM ACCEPTABLE

Barnes Medical College.  
Kansas City Hahnemann Medical College.

CLASS C.—MEDICAL COLLEGES WHICH WOULD REQUIRE A COMPLETE REORGANIZATION TO MAKE THEM ACCEPTABLE

American Medical College.  
Ensworth Medical College.  
Hippocratean Medical College (suspended).  
St. Louis College of Physicians and Surgeons.  
Western Eclectic College of Medicine and Surgery (now called Eclectic Medical University).

The rating by the A. M. A. Council, which is based upon an actual inspection of all the schools as well as upon all other information available, was published in *The Journal A. M. A.*, June 18, 1910. The Secretary of the Council, Dr. N. P. Colwell, states in a letter dated April 26, 1911, that the above rating of the Missouri schools remains unchanged.

In further explanation of the above rating, the following is quoted from the report of the Reference Committee on Medical Education, adopted by the House of Delegates of the A. M. A. "This investigation has covered several years. We believe it has been done conscientiously and with thoroughness. The standing of all schools has been made on a uniform basis of marking that is broad and fair. Whatever questions there might be as to the absolute value of the rating giving a school, there can be no question that the rating fairly expresses the relative standing of the schools.

"After investigation, the Reference Committee is impressed with the leniency with which the ratings have been made. Consequently, we would urge the schools in class A (rated over 70 per cent.) not to feel that they have reached perfection because they are designated 'first class.'

"The schools in class B were rated at 50 to 70 per cent. They are unsatisfactory in certain particulars but capable of improvement to a satisfactory basis. To all these schools information has been sent showing in what lines improvement should take place.

"Class C comprises the schools falling below a rating of 50 per cent. Some of these schools are regarded as hopeless; others can be made satisfactory only by a thorough reorganization along more advanced lines. The Council will gladly furnish information to these schools as to their shortcomings if they desire it.

"The Council believes that the time has come when the best interests of medical education demand that this rating of schools should be made public. In this opinion the Reference Committee concurs. It seems to be a disagreeable but necessary duty."

With regard to the rating of the various schools of the state by the Missouri State Board of Health, the following statement is furnished by the Secretary, Dr. Frank B. Hiller:

"For your information I wish to say that the following named medical teaching institutions of this State are regarded by the Missouri State Board of Health, as accredited schools, viz.: University of Missouri Medical Department; Washington University Medical Department; St. Louis University School of Medicine; Barnes Medical College; American Medical College; College of Physicians and Surgeons, St. Louis; University Medical College, Kansas City; Hahnemann Medical College; Ensworth Medical College, St. Joseph.

"The Eclectic Medical University of Kansas City remains a discredited college.

"I will say that last fall the State Board of Health found it necessary to condition the Ensworth Medical College. Since that action was taken by the State Board of Health the college has met the requirements of the Board in that they have very materially added to the laboratory equipment, improved the library, etc.

"A further condition imposed upon this school was that the freshmen and sophomore classes should be held during the present term for a period of two months longer than that announced in the bulletin for 1910-11."

Certain other data are available which throw light upon the question as to the relative merits of the various schools. First may be mentioned the results of the examination of graduates of the various schools before the state licensing boards. These are shown in the following Tables 3 and 4.



TABLE III  
Results of the Examination of Graduates of Missouri Schools Before All State Boards.

Name of School	Years 1905-6-7-8-9			Year 1910		
	All Graduates No. Ex- amined	Per Cent. of Failure	Recent Graduates No. Ex- amined	All Graduates No. Ex- amined	Per Cent. of Failure	Recent Graduates No. Ex- amined
American Medical College.....	59	33.9	46	8	50.0	6
Barnes Medical College.....	530	37.4	475	90	31.1	77
Coll. P. & S. (St. Louis).....	379	42.7	340	67	41.8	56
St. Louis Univ. Medical School....	570	17.7	544	109	4.6	106
Washington Univ. Medical Sch....	421	10.0	394	95	3.2	92
Eclectic Medical University.....	34	35.3	34	10	40.0	9
Hahnemann Medical College.....	61	21.3	56	29	20.7	28
Univ. Med. Coll. (Kansas City)....	373	18.2	328	67	17.9	56
Ensworth Medical College.....	214	35.5	198	35	42.9	31
Univ. of Missouri Medical School...	53	9.4	40	0	0.0	0

The data included in the preceding table for the years 1905-6-7-8-9 were collected by the Council on Medical Education of the A. M. A., and have been published in the various State Board Numbers of *The Journal of the A. M. A.* The figures for the year 1910 (not yet published) were obtained through the courtesy of Dr. Colwell, Secretary of the A. M. A. Council. The term recent graduates, refers to those graduated within five years of the time at which the examination was taken.

ducted by the State University, the medical department of Washington University, and the St. Louis University School of Medicine.<sup>27</sup> It is but fair, however, to bear in mind that the inspection upon which this report is based was made two years ago, since which some of the schools have improved materially.

A further point of interest in this connection is the membership in the Association of American Medical Colleges, an organization which exercises considerable care in the admission of members. Only four medical schools of the State are members of this Association, and they are the four rated in Class A by the A. M. A. Council. Finally, standards of entrance requirements form a good index of the character of work which a school is likely to exhibit. No Missouri school outside the group just referred to requires more than a four-year high school course for admission (most of them considerably less). The entrance requirements for this group are as follows:

TABLE IV  
Results of Examination Before Missouri State Board.

Name of School	Years 1906-7-8-9		Year 1910	
	Total No. Examined	Per Cent. of Failure	Total No. Examined	Per Cent. of Failure
American Medical College..	38	50.	5	40.
Barnes Medical College....	155	49.	20	25.
Coll. P. & S. (St. Louis)...	117	66.	17	29.4
St. L. Univ. Med. School....	221	24.	42	0.
Washington Univ. Med. Sch.	182	13.	48	0.
Eclectic Medical Univ.....	10	70.	0	0.
Hahnemann Medical Coll....	9	44.	4	0.
Univ. Med. Coll. (K. C.)...	168	28.	19	15.8
Ensworth Medical College..	48	54.	10	30.
Univ. of Mo. Med. School..	21	5.	0	0.

The figures for the years 1907-8-9 in the preceding table were published in THE JOURNAL of the Missouri State Medical Association, Aug. 1909, p. 151. The figures for 1910 (unpublished) were obtained, as were those of the preceding table, through the courtesy of Dr. Colwell.

It will be noted that the results of the State Board examinations of Missouri graduates agree closely with the ratings of the various schools by the A. M. A. Council. Further data for an independent basis of comparison may be found in Flexner's report on Medical Education in the United States and Canada. This report contains a detailed and critical discussion of the various schools, based upon a personal inspection in 1909. All who are interested in medical education should certainly read this report, although many consider it too sweeping in its conclusions. Copies of the report may be procured from the Carnegie Foundation for the Advancement of Teaching, 576 Fifth Avenue, New York City. Lack of space prevents an adequate review of the report at this time, but the following quotation will serve for purposes of comparison with other findings: "The State (Missouri) is badly overcrowded with practitioners trained in poor schools, and still maintains some of the poorest schools in the country. Utterly wretched are (1) Kansas City Hahnemann Medical College, (2) Central College of Osteopathy, (3) American School of Osteopathy (Kirksville), (4) St. Louis College of Physicians and Surgeons, (5) American Medical College, (6) Hippocratic College of Medicine: feeble and without promise are (7) Barnes Medical College. (8) Ensworth Medical College, and (9) University Medical College, though the last named is distinctly superior to the other eight. There remain the two-year school con-

Name of School	Entrance Requirements
St. Louis Univ. School of Med....	1 year of college work.
Univ. Med. Coll. (Kansas City)...	4 years high school.
Univ. of Mo. School of Medicine...	2 years of college work.
Washington Univ. Med. Dept.....	1 year of college work. (2 years beginning 1912)

Respectfully submitted,  
C. LESTER HALL, Chairman,  
C. M. JACKSON,  
W. S. ALLEE,  
The Council.

REPORT OF THE COMMITTEE ON OPHTHALMIA NEONATORUM

An association for the prevention of blindness was organized in St. Louis in June, 1910. In November, 1910, the first meeting of the Missouri Association for the Prevention of Blindness was held at Chillicothe; at that time it was suggested that there be a director appointed for each congressional district, also a number of directors at large, they to secure the cooperation of laymen and professional men in their locality for the organization of local societies.

The recognition of the fact that 10 per cent. of all blindness is caused by ophthalmia neonatorum led the trustees of the Sage Foundation to form a committee for the prevention of blindness; prior to this the American Medical Association had appointed a committee on ophthalmia neonatorum and advised that each state appoint similar committees. The Missouri committee was appointed first in 1909, and reorganized in 1910. We believe, under the leadership of these two great organizations, it should be a question of only a few years until blindness from this source should be unknown. During the past five years there has been a marked diminution in the reported number of cases of ophthalmia neonatorum. This is largely due to preventive measures used: by the close attention of obstetricians to the child for the first three days after parturition; through numerous articles that have been written by members of the profession and laymen; and

by public press comment. There can be no doubt but that the best method of combating this terrible disease is by educating the laymen along the lines of prevention. We should solicit membership for these societies through the various civic organizations, clubs and societies that have for their purpose the betterment of community interests.

It is apparent that the physician unsupported by an aroused public sentiment, based on a full understanding of the situation, can accomplish little. What is needed is a campaign of education carried into the homes. In a few states including Ohio, New York and Massachusetts, the legislature has made an appropriation of money to be used by the state commissioners of health in distributing preventive drops to physicians and midwives.

The following reports are submitted by physicians who are doing some special work along these lines:

Dr. John Green, Jr., an oculist of St. Louis states:

"The Missouri Association for the Prevention of Blindness, which was organized in St. Louis last June, issued a little folder entitled, 'Close Your Eyes. Try to Imagine What It Means to Be Blind,' which has been distributed to some extent in the city and state. Several thousand copies of this folder were placed in the ear which carried the tuberculosis exhibit through the state last summer, and many of these were taken up by those who visited the exhibit. In this folder a brief statement was made of the causes of preventable blindness and directions given as to the proper course for anyone to pursue in the event of being attacked by disease or receiving an injury to the eyes. Incidentally, the subject of ophthalmia neonatorum was touched upon.

"Since last November I have had a set of lantern slides issued by the New York Association for the Blind, illustrating the disastrous effects of neglected ophthalmia neonatorum. I have lectured before various lay organizations some six or eight times during the winter and spring on the subject of preventable blindness, with special reference to blindness from ophthalmia neonatorum. The whole subject has received some newspaper publicity. The organization has been hampered by lack of funds and a too small membership list. Recently an organization, known as the Social Service Conference of St. Louis, composed of workers in various lines of social endeavor, appointed a committee to investigate the whole question of blindness and the blind. This committee is now formulating plans for a St. Louis Association for the Blind, which shall take over the work of the Missouri Association for the Prevention of Blindness, and that of the Scotioic Aid Society, an organization devoted to the industrial aiding of the adult blind. Through the generosity of Mr. J. C. Jones, President of the Scotioic Aid Society, it has become possible to secure a trained social worker, who is devoting her entire time to the various problems in hand. We hope to be able to launch this organization in a formal way early next fall. In the meantime we are having prepared a careful census of the blind in St. Louis, and social workers under the direction of our paid secretary are investigating many of the problems connected with this subject. It seems to me that the time is ripe for the creation of a committee on the prevention of blindness to deal with all aspects of the question. This would be entirely in line with the action of the American Medical Association last June, which abandoned the committee on ophthalmia neonatorum and created a committee on the prevention of blindness. In the last five years, I have seen no cases of active ophthalmia neonatorum in private practice, and only four or five in hospital work. These cases were all seen within the first or second day of the disease and all recovered without damage to sight. I have seen one or two children 4 or 5 years of age with scarred corneas in which

the history pointed to infection at the time of birth. In both cases the vision was impaired but not lost."

Dr. Gail Allee, who is in general practice at Lamar, gives a fair illustration of ophthalmia neonatorum as we find it outside of the larger cities; he says:

"I see three or four cases of ophthalmia neonatorum per year, although none have been severe and yield promptly to boric acid solution and argyrol. I do not believe that I have ever seen an ophthalmia due to gonococci. My cases have all yielded quickly to treatment and have had a complete recovery without any damage to eyes in every instance. I cannot tell you the exact number of cases I have had for I have not kept any record. I do not think there is any diminution of the number of cases because I do not suppose there is a man in the county who makes a practice of using the 1 or 2 per cent. solution of nitrate of silver as recommended. I must confess that I do not. I use a concentrated solution of boric acid and occasionally, if I am suspicious, I use the silver preparation. I would suggest, that you recommend that the question, 'Did you use the 1 or 2 per cent. solution of silver in eyes to prevent ophthalmia?' be placed on the certificate of births by the board of health. I would suggest that the question state definitely what to use and the strength in which to use it so that it is always kept before the doctor and is more likely to become a routine procedure. I judge that the agitation of preventive measures for ophthalmia is attracting some attention among laity as I have been asked several times during the past few years by prospective patients, 'If I put anything in the eyes to prevent blindness?'"

Dr. C. A. Ritter, an obstetrician of Kansas City, writes:

"In early years of practice, we invariably employed (and advocated) the antepartum douche with bichlorid, lysol and permanganate of potassium as measures in preventing ophthalmia. When only the above supposed preventive measures were used we note ophthalmia occurred quite frequently. From our present knowledge of the pathological secretions of the vagina we know the most frequent and dangerous offender, the gonococcus, is not destroyed by any of the safe anti-septic douches.

"During the past fifteen years we have employed in our private practice where we had reason to believe the above indiscretion existed, a 2 per cent. solution of silver nitrate, using two or three drops in the infant's eyes immediately after delivery. During the above period no cases of the disease have developed.

"In connection with the obstetrical clinic of the University Medical College during the past ten years, it has been an imperative rule to use two or three drops of the above solution in the eyes of the infant immediately following labor. To the best of our knowledge over two thousand labors have been attended during said period and ophthalmia has not followed as a primary complication in more than ten cases, and none of these was of sufficient severity to destroy the sight.

"The same treatment has been and is now employed in the General Hospital of this city with virtually no complications from ophthalmia."

In conclusion, we would recommend, first, an amendment to the public health law reducing the period of notification of births from ten days to forty-eight hours; second, that the following be printed on the notification cards: "What preventive of ophthalmia do you use? If none, state the reason therefor;" third, that there be a committee appointed on "the prevention of blindness" instead of a committee on ophthalmia neonatorum.

Respectfully submitted,

CHARLES W. GOSNEY, M.D.  
BENJAMIN M. HYPES, M.D.,  
GAIL ALLEE, M.D.



## REPORT OF THE DEFENSE COMMITTEE

The Defense Committee had brought to its attention since our last meeting, eighteen suits for malpractice in the defense of which the Association has actively participated. We are glad to be able to report that none of the defendants has lost his cause. Either the creation of the Defense Committee is becoming better known to our members and more members have availed themselves of the services of the Defense Committee, or else an unusually large number of malpractice suits have been instituted. Which ever reason explains the greater number of suits does not matter. The fact remains that abundant opportunity has presented itself during the past year to test the efficiency of our organization and the loyalty of its members to each other; and no greater argument can be presented for an even still closer union of the medical practitioners of this state than the successful outcome resulting from presenting a solid phalanx when we are attacked as professional men. It is true that we must assume the legal responsibilities which our avocation entails, but it is equally true that we must jealously guard our rights. The solidarity of the medical men of this state as we find them gathered in the state organization is just beginning to bear fruit, and it will not be very long before an attack upon a medical man for malpractice will be made only after the most careful deliberation on the part of the attorneys and their clients.

It is to be regretted that the benefits of the defense against malpractice suits cannot be shared by all the medical men of this state who are eligible to membership in this Association.

There is as yet a very considerable number of eligible physicians in this state to whom it should be shown that membership in the State Association is more than an honor, that it carries with it protection to the physician and his family, which proper consideration will not permit him to overlook. Perhaps this phase of our organization has not been brought home to the physicians of the State sufficiently strong for it is inconceivable how medical men would be neglectful of these advantages if they were properly presented to them.

The Committee during the past year has expended in the defense of its members in cases which have been finally adjudicated \$450, while the cases *sub judice* will necessitate an expense which cannot at this time be definitely calculated.

The Committee would recommend that the Association instruct its editor to bring again to the attention of the members of the conditions which must be complied with before the committee can intelligently assist a member who is made a party to a suit. We would especially call attention to the necessity for presenting to the Committee an accurate history of the case which forms the basis of a law suit; and also do we desire to warn members against incurring financial obligations for the Association before the Committee has had an opportunity to investigate and to recommend.

For the purposes of the Defense Committee we would respectfully request the House of Delegates to add to the sum remaining in the treasury to the credit of the Defense Fund the sum of one thousand dollars.

Your Committee again wished to return its thanks and those of the Association to the Honorable Morton Jourdan, of St. Louis, for the services he has rendered at all times and cheerfully to the physicians of this organization.

F. J. LUTZ, Chairman.

W. B. DORSETT,

JOSEPH GRINDON,

Committee.

## MEMBERS REGISTERED AT KANSAS CITY MEETING

May 16, 1911

\*Abbott, J. W., Goldsberry.  
Adams, Noah, Kansas City.  
Adcock, D. C., Warrensburg.  
Adcock, J. A. B., Warrensburg.  
Albers, Edward A., Smithton.  
Allee, W. S., Olean.  
Altham, A. G., Metz.  
Amerland, J. H., St. Louis.  
Andrews, J. P., Marionville.  
Armour, W. A., Kansas City.  
Atkins, C., Independence.  
Austin, M. B., Brunswick.  
Ayars, T. R., St. Louis.  
Baldwin, F. V., Forsyth.  
Barelay, Robert, St. Louis.  
Barelay, W. D., Odessa.  
Barger, J. N., Albany.  
Barnes, Rollin H., St. Louis.  
Barney, Reuben, Chillicothe.  
Barnhart, Don. A., Huntsville.  
Bartlett, Willard, St. Louis.  
Baysinger, S. L., Rolla.  
Bazan, L. A., Clark.  
Beatie, W. R., Marshfield.  
Beattie, T. J., Kansas City.  
Beck, Leroy, St. Joseph.  
Bedford, S. V., Jefferson City.  
Beedle, Gordon H., Kansas City.  
Belove, B., Kansas City.  
Benham, Charles E., Parkville.  
Bentele, Elizabeth, St. Louis.  
Biggs, M. O., Bowling Green.  
Binnie, J. F., Kansas City.  
Blair, Edward G., Kansas City.  
Blakesley, T. S., Kansas City.  
Bliss, M. A., St. Louis.  
Block, J., Kansas City.  
Bogart, T. N., Excelsior Springs.  
Boggs, Nathan, Kansas City.  
Bohan, P. T., Kansas City.  
Bohling, C., Sedalia.  
Boteler, George M., St. Joseph.  
Boulware, T. C., Butler.  
Bradley, T. L., Warrensburg.  
Bradley, W. E., Ethel.  
Brady, Jules M., St. Louis.  
Braecklein, W. A., Higginsville.  
Breuer, W. H., St. James.  
Broderick, David E., Kansas City.  
\*Brookshire, J. E., Nowata, Okla.  
Brosius, W. L., Gallatin.  
Brown, C. A., Kansas City.  
Brown, Chas. H., Fair Play.  
Brown, F. H., Billings.  
Brown, John Young, St. Louis.  
Brown, O. H., St. Louis.  
Brown, Tinsley, Hamilton.  
Brunig, F. H., Kansas City.  
Bruton, J. W., Ozark.  
Buechler, J. L. A., Freeburg.  
Bullock, F. E., Forest City.  
Burford, C. E., St. Louis.  
Burke, John P., Sr., California.  
Burrill, C. W., Kansas City.  
Byrne, John I., St. Joseph.  
Campbell, O. B., St. Joseph.  
Campbell, W. S., Albany.  
Capell, Clarence, Kansas City.  
Carter, J. J., Weston.  
Carter, J. W., Kansas City.  
Carthrae, Lewis, Corder.

\*Visitor.

- Case, Z., Warrensburg.  
 Castle, O. L., Kansas City.  
 Cathcart, C. P., Kansas City.  
 Chalkley, A. J., Lexington.  
 Chambers, J. Q., Kansas City.  
 Chenoweth, L. C., Webb City.  
 Clapp, C. B., Moberly.  
 Cank, John R., St. Louis.  
 Clark, H. M., Platte City.  
 Clark, W. A., Jefferson City.  
 Clayton, Paul B., Odessa.  
 Clendenning, Logan, Kansas City.  
 Clemmons, W. M., Kansas City.  
 Coffelt, T. A., Springfield.  
 Coleman, H. B., Kansas City.  
 Conover, C. C., Kansas City.  
 Cook, R. F., Carrollton.  
 Cook, T. B., Rayville.  
 Cope, J. Q., Lexington.  
 Cordier, A. H., Kansas City.  
 Cotton, T. W., Van Buren.  
 Coughlin, W. T., St. Louis.  
 Cox, Lee, Springfield.  
 Craig, T. B. M., Nevada.  
 Crawford, H. S., Harrisonville.  
 Crider, A. J., Meta.  
 Crowe, B. D., Cruthersville.  
 Crowell, H. C., Kansas City.  
 Crowson, E. L., Pickering.  
 Cuppaidge, G. O., Moberly.  
 Curdy, R. J., Kansas City.  
 Curl, A. C., Schell City.  
 Curry, E. R., Kansas City.  
 Dandurant, Louis J., St. Joseph.  
 Davis, Charles U., Fredericktown.  
 Davis, E. T., Kansas City.  
 Davis, J. M., Craig.  
 De Vilbiss, E. F., Kansas City.  
 De Vilbiss, Frank, Tipton.  
 Dewey, C. O., Breckenridge.  
 Dixon, C. H., Holliday.  
 Dock, George, St. Louis.  
 Dod, F. L., Kansas City.  
 Donnell, R. E., De Soto.  
 Doolin, L. R., Gallatin.  
 Dorsett, Walter B., St. Louis.  
 Dowell, George S., Braymer.  
 Downing, T. J., New London.  
 Drake, N. A., Kansas City.  
 Duncan, J. H., St. Louis.  
 Dunsmore, J. M., St. Joseph.  
 Dyer, D. P., Sedalia.  
 Dyer, R. H., Marshall.  
 Elam, W. T., St. Joseph.  
 Eldredge, J. S., Kansas City.  
 Ellis, Frank B., Garden City.  
 Elmer, W. P., St. Louis.  
 Epler, J. W., Bucklin.  
 Estell, W. G., Lawson.  
 Evans, C. L., Oregon.  
 Faires, Oliver P., Kansas City.  
 Farrow, G. W., Kansas City.  
 Fassett, Charles W., St. Joseph.  
 Ferguson, A. D., Kansas City.  
 Ferguson, W. J., Sedalia.  
 Fore, T. P., Brookfield.  
 Forgave, L. R., St. Joseph.  
 Foster, Hal, Kansas City.  
 Foster, T. N., Coffey.  
 Frankenburger, J. M., Kansas City.  
 Freudenberger, H. C., Clarksburg.  
 Frick, William, Kansas City.  
 Frischer, Julius, Kansas City.  
 Froehling, F. W., Kansas City.  
 Fulkerson, J. J., Lexington.  
 Funkhouser, Robert M., St. Louis.  
 Fuson, F. B., Springfield.  
 Gaines, J. W., Kansas City.  
 Gale, F. W., Marquand.  
 Gashwiler, J., Schooling, Novinger.  
 Gayle, V. W., Kansas City.  
 Gebhart, Oliver C., St. Joseph.  
 Geiger, Charles, St. Joseph.  
 Geiger, Jacob, St. Joseph.  
 Gellhorn, George, St. Louis.  
 Gentry, W. H., Carthage.  
 Gist, W. L., Kansas City.  
 Givens, H. K., Fayette.  
 Gleaves, O. G., St. Joseph.  
 Goins, George W., Breckenridge.  
 Goldman, Max, Kansas City.  
 Good, C. A., St. Joseph.  
 Goodier, Robert H., Hannibal.  
 Goodson, J. N., Kansas City.  
 Goodson, William H., Liberty.  
 Goodwin, E. J., St. Louis.  
 Gore, D. C., Marshall.  
 Gosney, Charles W., Kansas City.  
 Grace, H. M., Chilesothe.  
 Graves, William W., St. Louis.  
 Gray, A. L., St. Joseph.  
 Green, John, Jr., St. Louis.  
 Griffith, A. C., Kansas City.  
 \*Griffith, H. N., Mt. Ayr, Iowa.  
 Griffith, J. D., Kansas City.  
 Grindon, Joseph, St. Louis.  
 Gunn, A. J., Versailles.  
 Haire, Robert D., Clinton.  
 Haley, Robert, Brookfield.  
 Hall, C. Lester, Kansas City.  
 Hall, D. Walton, Kansas City.  
 Hall, Frank J., Kansas City.  
 Hall, G. C., Lee's Summit.  
 Hall, John R., Marshall.  
 Hamel, George F., Kansas City.  
 Hamilton, Buford G., Kansas City.  
 Hamilton, Hugh D., Kansas City.  
 Hamilton, R. L., Richmond.  
 Hampton, J. R., Clinton.  
 Hamson, J. F., Mexico.  
 Hanks, James, Brashea.  
 Hanna, D. F., Gallatin.  
 Hardin, C. B., Kansas City.  
 Harral, W. E., St. Louis.  
 Harrelson, N. O., Kansas City.  
 Harris, D. L., St. Louis.  
 Harris, J. A., Mt. Vernon.  
 Harris, J. E., Marshall.  
 Harrison, A. W., Kansas City.  
 Harrison, A. W., Little Blue.  
 Hayden, John G., Kansas City.  
 Hays, B. W., Jackson.  
 Heitzman, Charles W., Kansas City.  
 Hemker, W. H., Catawissa.  
 Henderson, James P., Kansas City.  
 Henson, L., Galena.  
 Herndon, A. S., Camden Point.  
 Hertzler, Arthur E., Kansas City.  
 Hess, H. Lewis, Kansas City.  
 Hickerson, J. C., Independence.  
 Hill, Howard, Kansas City.  
 Hill, Roland, St. Louis.  
 Hill, W. H., Kansas City.  
 Hiller, Frank B., Jefferson City.  
 Holbrook, R. W., Kansas City.  
 Hollis, L. T., Kansas City.  
 Homan, George, St. Louis.  
 Hornback, E. T., Hannibal.  
 Howard, Joseph W., Kansas City.  
 \*Hoxie, G. H., Kansas City.  
 Hull, A. G., Kansas City.  
 Hull, E. R., Camden Point.  
 Hunt, J. E., Kansas City.  
 Hyndman, Charles E., St. Louis.  
 Iuen, F. J., Kansas City.  
 Jackson, C. M., Columbia.



- Jackson, Jabez N., Kansas City.  
 James, R. M., Joplin.  
 James, Samuel C., Kansas City.  
 Janes, Vincil, Cameron.  
 Jerard, H., Pleasant Hill.  
 Johnson, J. McB., West Plains.  
 Jones, G. M., Lincoln.  
 Jones, K. P., Kansas City.  
 Jones, W. G., Lincoln.  
 Kelly, E. H., Kansas City.  
 Kelly, Sam G., Sedalia.  
 Kemp, W. P., Hale.  
 Kenney, W. L., St. Joseph.  
 Kepner, John W., Kansas City.  
 Kieffer, A. R., St. Louis.  
 Kimsey, J. T., Lathrop.  
 Klingner, Thomas O., Springfield.  
 Knerr, E. B., Kansas City.  
 Knox, A. C., Kansas City.  
 Koetter, A. F., St. Louis.  
 Kuhlmann, F. C. E., St. Louis.  
 Kuhn, H. P., Kansas City.  
 Kuhn, William F., Kansas City.  
 Kyger, Fred. B., Kansas City.  
 Kyger, John W., Kansas City.  
 Ladd, Fred. A., St. Joseph.  
 Lake, N. E., Kansas City.  
 Landaker, C. L., Collins.  
 Lane, H. H., Kansas City.  
 Lapp, John G., Kansas City.  
 Latham, H. W., Latham.  
 Lan, Gustave A., St. Joseph.  
 Leach, H. T., Elston.  
 Lee, B. J., Norborne.  
 Lec, Herbert, St. Joseph.  
 Leeper, C. C., Braymer.  
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 Lindley, W. T., Hamilton.  
 Liston, E. H., Cedar Springs.  
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 Logan, James E., Kansas City.  
 Long, L. S., St. Joseph.  
 Look, H. H., Kansas City.  
 Lowe, F. M., Kansas City.  
 Lowry, Walter J., Kansas City.  
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 Lutz, F. J., St. Louis.  
 Lux, Paul, Kansas City.  
 Lyle, Halsey M., Kansas City.  
 McAlester, A. W., Columbia.  
 McAlester, A. W., Jr., Kansas City.  
 McArthur, A. W., Kansas City.  
 McCall, H. B., Kansas City.  
 McCandless, O. H., Kansas City.  
 McCandless, W. A., St. Louis.  
 McComas, A. R., Sturgeon.  
 McConkey, C. M., Lathrop.  
 McDermott, J. L., Kansas City.  
 McGill, W. J., St. Joseph.  
 McGlothlan, A. B., St. Joseph.  
 McKee, Joseph W., Kansas City.  
 McLemore, T., Nevada.  
 McMichael, Austin, Rockport.  
 McVey, N., Jefferson City.  
 Mackey, J. F., Odessa.  
 Madry, A. H., Aurora.  
 Mairs, E. J., Laredo.  
 Major, Hermon S., Hardin.  
 Mallett, E. Pierre, Kansas City.  
 Mann, A. W., Oak Grove.  
 Mann, F. W., Wellington.  
 Manning, D. F., Marshall.  
 Marchildon, John W., St. Louis.  
 Mark, E. G., Kansas City.  
 Marsh, H. S., Tipton.  
 Martin, J. C., Kansas City.  
 Matthews, F. H., Liberty.  
 Mead, S. T., Slater.  
 Meisenbach, A. Edward, St. Louis.  
 Merriman, C. S., Kansas City.  
 Miller, E. H., Liberty.  
 Miller, Hugh, Kansas City.  
 Miller, J. M., Montrose.  
 Miller, S., Uriah.  
 Miller, T. C., Ash Grove.  
 Mitchell, J. T., Kansas City.  
 Moennighoff, Fritz, Kansas City.  
 Mook, W. H., St. Louis.  
 Moore, W. G., St. Louis.  
 Morrow, W. F., Kansas City.  
 Morton, Daniel, St. Joseph.  
 Morton, H. L., Kansas City.  
 Mosher, George C., Kansas City.  
 Mott, J. S., Kansas City.  
 Murphy, Franklin E., Kansas City.  
 Murray, S. A., Holden.  
 Musser, Charles W., Metz.  
 Musson, E. H., Norborne.  
 Myer, Jesse S., St. Louis.  
 Myers, Walter C., Savannah.  
 Naylor, Alva, Platte City.  
 Neely, James E., Calhoun.  
 Neff, Frank C., Kansas City.  
 Neff, Robert L., Joplin.  
 Neilson, C. H., St. Louis.  
 Newlon, C. S., Kansas City.  
 Newlon, J. S., Ballard.  
 Nicholson, C. M., St. Louis.  
 Nietert, H. L., St. Louis.  
 Nifong, Frank G., Columbia.  
 Nifong, William, Fredericksburg.  
 Nixon, J. W., Kansas City.  
 Norberg, George B., Kansas City.  
 Northcutt, G. T., Seligman.  
 Northcutt, L. B., Washburn.  
 Nowlin, David, Montgomery City.  
 O'Connor, C., Kansas City.  
 O'Dell, T. T., Ellington.  
 Ousley, J. W., Kansas City.  
 Oven, T. P., Brookfield.  
 Overholser, M. P., Nevada.  
 Owens, M. J., Kansas City.  
 Parish, E. E., Memphis.  
 Parker, O. H., Kansas City.  
 Parrish, Bert B., Kirksville.  
 Parrish, J. C., Vandalia.  
 Patterson, William R., Warrensburg.  
 Paul, Thomas M., St. Joseph.  
 Paulette, A. W., King City.  
 Pearce, Herman E., Kansas City.  
 Perkins, J. W., Kansas City.  
 Peters, M. L., Cameron.  
 Pickard, M. W., Kansas City.  
 Pipkin, W. D., Excello.  
 Pitts, Barton, St. Joseph.  
 Pitzman, Marsh, St. Louis.  
 Poorman, Bert A., Kansas City.  
 Porter, Allen L., Kansas City.  
 Porter, D. R., Kansas City.  
 Porter, E. S., Milan.  
 Postlewait, J. A., Tarkio.  
 Potter, T. E., St. Joseph.  
 Powers, John A., Warrensburg.  
 Prentiss, H. S., Pleasant Hill.  
 Price, R. P., Nevada.  
 Proud, W. C., Oregon.  
 Prowell, J. D., Longwood.  
 Pugsley, Fred N., Kansas City.  
 Puntton, John, Kansas City.  
 Putnam, Ola, Marceline.  
 Quast, Ernest von, Kansas City.

- Rabeneau, W. J., Fordland.  
 Rea, Robert W., Plattsburg.  
 Reder, F., St. Louis.  
 Redman, Spence, Platte City.  
 Reed, William M., Kansas City.  
 Reid, D. W., Slater.  
 Reid, H. L., Charleston.  
 Reynolds, W. T., Kansas City.  
 Rhoades, H. A., Foster.  
 Rhodes, E. L., Lincoln.  
 Rice, William, Kansas City.  
 Richart, G. A., Blackburn.  
 Riordan, H. D., Kansas City.  
 Ritter, C. A., Kansas City.  
 Roberts, J. S., Kansas City.  
 Roberts, M. G., Lexington.  
 Robertson, J. A., Kansas City.  
 Robertson, John M., Bunceon.  
 Robichaux, E. C., Excelsior Springs.  
 Robinson, G. Wilse, Kansas City.  
 Robinson, J. F., Nevada.  
 Robinson, John L., Kansas City.  
 Rogers, Ford B., Kansas City.  
 Roselle, T. A., Palmyra.  
 Rothwell, John H., Liberty.  
 Royer, J. Elliott, Kansas City.  
 Rush, George B., Lathrop.  
 Russell, E. L., Kansas City.  
 Russell, J. J., Deepwater.  
 Russell, J. M., Monett.  
 Ryland, C. T., Lexington.  
 Sanders, Frank L., Kansas City.  
 Sawyer, Tom, Kansas City.  
 Schauffler, E. W., Kansas City.  
 Schauffler, R. McE., Kansas City.  
 Scherck, H. J., St. Louis.  
 Schlueter, Robert E., St. Louis.  
 Schmid, O. A., Bethany.  
 Schoemaker, D. M., St. Louis.  
 Scholz, Roy Ph., St. Louis.  
 Schooley, R. C., Fayetteville.  
 Schreiman, Ferdinand, Concordia.  
 Scott, J. N., Kansas City.  
 Scott, W. B., Bucklin.  
 Seba, John D., Bland.  
 Sevier, Robert, Richmond.  
 Sharpe, Norville W., St. Louis.  
 Sheetz, Robert, Orrick.  
 Shelton, J. C., Chillicothe.  
 Shelton, M. C., Joplin.  
 Shelton, William A., Kansas City.  
 Sherer, J. W., Kansas City.  
 Shumate, D. L., Kansas City.  
 Shy, D. E., Knobnoster.  
 Shy, M. P., Sedalia.  
 Sisson, W. B., Kahoka.  
 Skinner, Edward H., Kansas City.  
 Skoog, A. L., Kansas City.  
 Skrainka, Philip, St. Louis.  
 Sloan, O. J., Neosho.  
 Sloan, R. T., Kansas City.  
 Sluder, Greenfield, St. Louis.  
 Smith, C. A., Osceola.  
 Smith, J. D., Shelby.  
 Smith, J. M., Butler.  
 Smith, J. R., Warsaw.  
 Songer, H. E., Jamesport.  
 Spencer, Floyd H., St. Joseph.  
 Spotts, B. M., Marshall.  
 Stamey, J. T., St. Joseph.  
 Stauffer, W. H., St. Louis.  
 Steckman, P. M., Plattsburg.  
 Stephenson, J. T., Tina.  
 Stevens, B. N., Chillicothe.  
 Stevens, W. W., Kansas City.  
 Stewart, E. L., Kansas City.  
 Stewart, John, Mt. Vernon.  
 Stone, A. B., Lamar.  
 Stone, J. M., Laredo.  
 Strode, Robert C., Mexico.  
 Suddarth, C. H., Smithville.  
 Sutton, Richard L., Kansas City.  
 Swahlen, Percy H., St. Louis.  
 Swaney, A. G., Lee's Summit.  
 Switzer, Clyde, Kansas City.  
 Talbott, Hudson, St. Louis.  
 Tatum, H. E., Brunswick.  
 Taulbee, J. B., Joplin.  
 Taussig, Fred. J., St. Louis.  
 Taylor, E. P., Fairfax.  
 Taylor, L. G., Kansas City.  
 Terry, N. F., Springfield.  
 Terry, R. J., St. Louis.  
 Tesson, N. A., Kansas City.  
 Thompson, George B., Kansas City.  
 Thompson, George R., St. Joseph.  
 Thompson, R. L., St. Louis.  
 Thompson, W. G., Holden.  
 Thornburgh, A. H., West Plains.  
 Thrailkill, E. H., Kansas City.  
 Tiemann, T. G., Kansas City.  
 Tiffany, Flavel B., Kansas City.  
 Timberman, John H., Marston.  
 Todd, L. A., St. Joseph.  
 Todd, T. B., Adrian.  
 Tout, B. B., Archie.  
 Tuttle, H. W., Adrian.  
 Van Eman, F. T., Kansas City.  
 Vandivert, A. H., St. Joseph.  
 Voegelin, Samuel, Kansas City.  
 Wade, E. E., Clever.  
 Wallace, Charles H., St. Joseph.  
 Wallis, J. R., Clinton.  
 Wasson, W. B., Nixa.  
 Weiss, R. S., St. Louis.  
 Welch, A. J., Kansas City.  
 Welch, J. Franklin, Salisbury.  
 Welch, W. A., Callao.  
 West, W. M., Monett.  
 Wetzell, N. M., Jameson.  
 Whipple, N. L., Butler.  
 Whiteley, G. W., Albany.  
 Widner, A. N., Newtown.  
 Williams, D. B., Maywood.  
 Williams, J. H., Hume.  
 Willis, J. B., Farley.  
 Willson, G. C., Nevada.  
 Wilson, Dora Green, Kansas City.  
 Wilson, John, Kansas City.  
 Wilson, R. P. C., Platte City.  
 Winningham, W. H., Trenton.  
 Winter, J. H., Parkville.  
 Wood, E. A., Sedalia.  
 Wood, James F., Kansas City.  
 Wood, N. P., Independence.  
 Wood, W. S., Oregon.  
 Woodson, C. R., St. Joseph.  
 Woolsey, C. L., Braymer.  
 Wright, W. K., East Lynne.  
 Wyer, H. G., Kirkwood.  
 Yater, J. M., Nevada.  
 Young, J. C., Ozark.  
 Zwart, B. H., Kansas City.  
 Zillman, A. W., Brunswick.  
 Total 559.

#### CASS COUNTY MEDICAL SOCIETY

Cass County Medical Society met at Harrisonville, June 1. Members present: Drs. Brierly, Chaffin, Crawford, Elder, Fair, Triplett and Wright.

The scientific program contained the following paper: "Child Hygiene," by Dr. A. R. Elder. This was well prepared and the author showed excellent judgment in his handling of a subject so vital in its



interest to the country doctor as well as to the laity. All members took part in an interesting discussion of the subject.

A report of the meeting of the state medical association was made by the delegate, Dr. H. S. Crawford.

A quiz on "Diseases of the Blood-Vessels" was conducted by Dr. H. A. Brierly. This was a very instructive part of the program and was ably conducted by the quiz-master.

Dr. W. A. Fair, of Pleasant Hill, was elected a member.

The society decided to discontinue the post-graduate course of study and try some other plan in arranging the program, to see if the members would take more interest in the meetings.

H. S. CRAWFORD, M.D., Secretary.

### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met at the office of the president, Dr. U. S. Wright, in Fayette, May 5. Present: Drs. Wright, Lewis, Burgwin, Kitchen, Lee, Payne, Watts.

No cases were presented and no papers were read. Drs. Lewis, Bonham and Richards were given until the June meeting to prepare papers.

Salvarsan (606) was to have been made the topic of discussion for the evening with Dr. Moore opening; Dr. Moore was not present and the members present made informal reports of their experiences. Dr. Lee reported several cases apparently cured and Dr. Payne reported a case that showed great improvement after one intravenous injection; he suggested that several cases be brought to the next meeting.

Dr. Burgwin called attention to the lack of papers and discussions and urged the members to be more faithful in discharging their duties when placed on the program. Dr. Smith was requested to present a case of pellagra at the June meeting.

The secretary reminded the members of the state society meeting at Kansas City on May 16, and of the North Missouri Medical Association meeting at Columbia on June 9. He reported also that he had sent two papers to the state society meeting as requested.

#### MEETING OF JUNE 2

The society met at Fayette on June 2, with the following members present: Drs. Kitchen, Hawkins, Burgwin, Bonham, Moore, Lee, Wright, Richards, Watts.

Dr. Richards presented two children under 2 years who had been severely affected by gases emanating from green paper freshly applied to the walls in the home; there was paralysis of the diaphragm and the temperature rose to 100; the attacks lasted 48 hours.

Dr. Watts read a paper on "The Eye as an Index to Constitutional and Local Lesions," in which he scored the grafting optometrists. The paper was highly complimented.

Drs. Moore and Lee discussed the use of salvarsan and reported favorable results in a number of cases.

Drs. Hawkins, Bonham, Kitchen and Lewis were appointed to have papers for the July meeting.

By special vote the July meeting will be held at Wingfield Lake. This will be a picnic meeting.

C. W. WATTS, M.D., Secretary.

### MONITEAU COUNTY MEDICAL SOCIETY

Moniteau County Medical Society met in regular session, June 8, 1911. The president being absent Dr. J. H. Lang occupied the chair. Present: Drs. J. M.

Robertson, W. H. Elliott, Fry, P. E. Williams, Frank DeVilbiss, J. H. Lang, H. C. Freudenberger.

There was no program for the meeting but several interesting cases were presented and discussed.

Dr. H. S. Marsh was given a transfer card to Vernon County Medical Society. Dr. J. H. Lang was given a commendatory testimonial to the Orange County Medical Society of California. Both Dr. Marsh and Dr. Lang are young men of splendid educational training; both are energetic and honorable gentlemen and will be a valuable addition to any medical society.

The next meeting will be held on the second Thursday in September.

H. C. FREUDENBERGER, M.D., Secretary.

### STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its regular monthly meeting Wednesday, June 14, 1911.

The application of Dr. James A. Turner of Coffman, for membership was voted on and he was unanimously elected as a member.

All business having been transacted, the Society adjourned until the second Wednesday in July, 1911.

R. M. LANNING, M.D., Secretary.

### ANNUAL MEETING OF THE MISSOURI SOCIETY OF MEDICAL SECRETARIES

The third annual meeting of the Medical Secretaries was held at the Coates House at 5 o'clock p. m., May 16; about twenty members in attendance. An excellent paper was read by Dr. E. L. Stewart on "The County Medical Society: Its Use to the Profession and Public; and the Technique of Its Administration." Discussion by Drs. Herbert Lee, W. C. Proud, J. R. Smith, H. S. Crawford, A. McMichael and others. Adjournment was then taken to the dining-room, where the proceedings were continued in regular form. Dr. E. J. Goodwin, state secretary, read a paper full of good advice, in which he assured the secretaries that their services were appreciated and that he would cooperate to the full extent of his ability in serving the best interests of the various county societies. Dr. Craig, assistant to the secretary of the American Medical Association, was present and favored the society with an excellent talk on organization, which was much appreciated by those present. Dr. Herman E. Pearse, president of the State Association, also made a brief address. A unanimous vote of thanks was extended to Dr. Goodwin for his efficient services as state secretary, and also to Dr. Fassett, the retiring secretary of the Secretaries' Society. While no formal action was taken on the question, it was the consensus of opinion that the society dues should not be advanced at the present time.

The election of officers resulted as follows: President, Dr. E. L. Stewart, Kansas City; first vice, Dr. F. C. E. Kuhlmann, St. Louis; secretary-treasurer, Dr. Bert B. Parish, Kirksville.

## BOOK REVIEWS

**LIPPINCOTT'S NEW MEDICAL DICTIONARY.** A vocabulary of the terms used in medicine and the allied sciences with their pronunciations, etymology, and signification, including much collateral information of a descriptive and encyclopedic character. By Henry W. Cattell, A.M. (Laf.), M.D. (U. of P.). Svo. flexible leather. Pp. 1108. Philadelphia & London. J. B. Lippincott Co., 1910.

Besides possessing the advantage of being a recent edition, this dictionary has several features not common to other dictionaries. One of these is a cross-reference system that is simple and efficient; e. g., under *amblyopia* there are references to amaurosis, hemeralopia and nyctolopia; at the end of the definition of *amusia* there is a reference to the associated paramusia; at puberty, to menstruation and nubility, etc. Under many of the more important words lists of especially named varieties have been carefully prepared, and alphabetically arranged, giving at a glance an oversight of what may be found at other places in the dictionary.

The arrangement of words is particularly commendable. Such parts of speech as adverbs, adjectives, participles, derivatives formed by adding common suffixes, or words closely associated in thought with the main word, have not been given a separate vocabulary entry, but are grouped with or without definition as the case requires. Thus, under *amblyopia*, the adjective *amblyopic* is entered without definition; the more unusual derivatives *amblyopiatrics* and *amblyoscope*, while in the same paragraph have their definition. Except in instances like the above the arrangement of the words is strictly alphabetical. The orthography is conservative.

At the back of the volume will be found tables of customary weights and measures, with interrelations noted in each case.

**PSYCHOPATHIA SEXUALIS, A MEDICO-FORENSIC STUDY.** By R. v. Krafft-Ebing. Only authorized English adaptation of the twelfth German edition. By R. J. Rebman. Svo. cloth. Pp. 617. New York. Rebman Co. 1906.

The twelfth edition of this celebrated work, of which this is a translation, was entirely rewritten and considerably enlarged by the author shortly before his death.

In this translation the Latin quotations which occur in the twelfth edition are given in English.

**THE PHYSIOLOGY OF REPRODUCTION.** Francis H. A. Marshall, M.A., Fellow Christ's College, Cambridge. With a Preface by Prof. E. A. Schafer, F. R. S., and Contributions by W. Cramer, Ph.D., and Jas. Lochhead, M.D. Cloth. Svo. Pp. 706, illus. 154. New York. Longmans, Green & Co., \$6.00. 1910.

Doctor Marshall has here given us a book which is one of the most comprehensive that has recently appeared, on a branch of physiology which has been too generally avoided.

While the biologist will find the book of primary interest, there is much for the gynecologist, and the general practitioner; indeed any one who is especially interested in the reproductive process will find the volume a source of instructive interest.

Doctor Marshall cites copiously the many theories relative to the various phases of the subject; and the different views held regarding the salient points in discussion are freely presented.

A few of the chapter heads are as follows: "The Breeding Season," "The Oestrous Cycle in the Mammalia," "Fertilization," "Biochemistry of the Sexual Organs," "Fetal Nutrition," "Fertility," "Factors Which Determine Sex," "Phases In the Life of the Individual." In the chapter on Sex Determination the

author concludes thus: "When once we admit the existence of latent (recessive) sexual characters in individuals in which the characters of one sex are dominant, and that under certain circumstances those of the latent sex can develop at the expense of the dominant ones, in response to appropriate physical stimuli, we are compelled to acknowledge also that the sex of the future individual is not always predetermined in the gametes or even in the fertilized ovum, but may be called into being at a later stage of life."

Such an admission is of course opposed to some extent to the modern tendency to believe that sex is fixed irrevocably in the fertilized ovum or in the gametes before fertilization; but while there is evidence amounting to proof that this is the case in some forms of life, it does not necessarily follow that it is true of all metazoon animals, or even that it is so of the particular species which have been investigated. On the other hand many of the facts enumerated above point to the conclusion that the sex of the future organism is determined in different cases by different factors and at different stages of development—either in the unfertilized gamete, or at the moment of fertilization, or in the early embryo, while the effects of castration indicate that an alteration in the metabolism, even in comparatively late life, may initiate changes in the direction of the opposite sex."

**A MANUAL OF PRACTICAL INORGANIC CHEMISTRY.** Including preparations and qualitative and quantitative analysis, with the rudiments of gas analysis specially adapted to cover preliminary and intermediate university courses and the first three stages of the syllabus of the Board of Education. By A. M. Kellas, B.Sc. (Lond.), Ph.D. (Heidelberg). Svo. Cloth. Pp. 347. Illust. 51. New York. Oxford University Press. 1910. \$1.35.

The most sensible chemistry we remember to have seen. The practitioner who on occasion wishes to undertake a little work along chemistry lines, but with whom details have become vague, will appreciate this manual in which directions are liberal and definitions are intelligible.

The volume is intended first of all for the laboratory student, but the general practitioner will find it to be a valuable addition to his working library.

**PROGRESSIVE MEDICINE.** Vol. I, March, 1911. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 355 pages, with 18 engravings. Per annum, in four paper-bound volumes, containing over 1,200 pages, \$6.00. net; in cloth, \$9.00. net. Lea & Febiger, Publishers, Philadelphia and New York.

In *Progressive Medicine* will always be found the very latest discussions of the subjects taken up, and the superlative value of the publication to the general practitioner, and the specialist, cannot be too strongly emphasized. The contributors to the volume for March, 1911, are: "Surgery of the Head, Neck and Thorax," Chas. H. Frazier, M.D. "Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza," John Ruhrah, M.D. "Diseases of Children," Floyd M. Crandall, M.D. "Rhinology and Laryngology," D. Braden Kyle, M. D. "Otology," Arthur B. Duel, M.D.

**PROGRESSIVE MEDICINE.** Vol. II, June, 1911. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Svo. pp. 397, with 51 cuts, drawings, and illustrations. Per annum, in four paper-bound volumes, containing over 1,200 pages, \$6.00. net;



cloth, \$9.00 net. Lea & Febiger, Publishers, New York.

We always feel safe in recommending *Progressive Medicine*; it never fails to present the newest, and the most authoritative, in the subjects under discussion. The physician and the surgeon will not find this number disappointing. For June, 1911, the contributors are: "Hernia," Wm. B. Coley, M.D. "Surgery of the Abdomen, Exclusive of Hernia," Arpad G. Gerster, M.D. "Gynecology," John G. Clark, M.D. "Diseases of the Blood; Diathetic and Metabolic Diseases; Diseases of the Thyroid Gland; Nutrition, and the Lymphatic System," Alfred Stengel, M.D. "Ophthalmology," Edward Jackson, M.D.

**A TEXT-BOOK OF GENERAL BACTERIOLOGY.** By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Fully illustrated. Second edition, thoroughly revised. 8vo. cloth. Pp. 594. Philadelphia & London. W. B. Saunders Co. 1910.

A general introduction to bacteriology; possessing a prospective of the subject, with emphasis on special features. The book serves adequately as a general bacteriology, and while of course the subject cannot be exhaustively considered in a work of this length, the volume comes up to the purpose of its author and is modern and entirely worthy of the study and research necessary for its preparation.

In this second edition a few errors found in the first are corrected, and certain omissions supplied, together with the addition of several new sections.

**BIOLOGY, GENERAL AND MEDICAL.** By Joseph McFarland, M.D., Professor of Pathology and Bacteriology, Medico-Chirurgical College of Philadelphia; Fellow of the College of Physicians of Philadelphia. 12mo. Cloth. Pp. 440. Illust. 160. London & Philadelphia. W. B. Saunders Co. 1910.

This biology is intended for the general physician, and the layman, rather than the full fledged biologist.

In chapters that are really interesting it takes the reader through the field of General Biology. The diction and arrangement are such that any one of reasonable education will find the book absorbing.

**CONSUMPTION. Its Prevention and Home Treatment. A Guide for the Use of Patients.** By H. Hyslop Thomson, M.D., medical superintendent Liverpool Sanitarium. Cloth. Pp. 75. New York. Oxford University Press. 1910.

This little book is addressed to sufferers from Tuberculosis and is replete with practical suggestions and rules for the conduct of the patient at home, with especial reference to the open air treatment. The fact that it is intended for the patient is kept in view throughout its pages, and it is by far one of the sanest books of its kind that we have seen.

**BISMUTH PASTE IN CHRONIC SUPPURATIONS.** Its diagnostic importance and therapeutic value. By Emil G. Beck, M.D., surgeon to the North Chicago Hospital. With an introduction by Carl Beck, M.D., and a chapter on the Application of Bismuth Paste in the Treatment of Chronic Suppuration of the Nasal accessory Sinuses and the Ear, by Joseph C. Beck, M.D. 8vo. cloth. Pp. 237. Illust. St. Louis. C. V. Mosby Co. 1910. \$2.50.

The value of bismuth paste in chronic suppurations and in diagnostic work is recognized. Every new thing has its enthusiasts and its detractors. The author of the book, who is the originator of the bismuth procedure, is rather optimistic, but not unduly so when one remembers that he has been very successful with the bismuth. It is not unlikely that the lack of success that has attended the efforts of some was due to their failure to master the technic thoroughly. This volume has been written to give exact information as to bismuth paste, and those who contemplate the employ-

ment of this agent cannot do better than study the book, as it contains about all that there is to be said on the subject.

Dr. Rudolph Beck, the author's brother contributes a chapter on the Use of Bismuth Paste in Dentistry.

## BOOKS RECEIVED

**HOSPITAL MANAGEMENT.** A Handbook for Hospital Trustees, Superintendents, Training School Principals, Physicians and all who are actively engaged in promoting hospital work. By Charlotte A. Aikens, Author of "Hospital Training-School Methods and the Head Nurse," "Primary Studies for Nurses," "Clinical Studies for Nurses." 12mo. of 488 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$3 net.

**STUDIES IN CARDIAC PATHOLOGY.** By George W. Norris, M.D., Associate in Medicine at the University of Pennsylvania. Large octavo of 233 pages, with 85 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5 net.

**PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URINARY BLADDER.** By Paul M. Pilcher, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Octavo of 398 pages, with 233 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

**A TEXT-BOOK OF MEDICAL DIAGNOSIS.** By James M. Anders, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, and L. Napoleon Boston, M.D., Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1195 pages, with 443 illustrations, 17 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$6 net; Half Morocco, \$7.50 net.

**THE ANATOMICAL HISTOLOGICAL PROCESSES OF BRIGHT'S DISEASE.** By Horst Oertel, M.D., Director of the Russell Sage Institute of Pathology, New York. Octavo of 227 pages, with 44 illustrations and 6 lithographic plates. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5 net.

**A TEXT-BOOK OF SURGICAL ANATOMY.** By William Francis Campbell, M.D., Professor of Anatomy at the Long Island College Hospital. Second edition revised. Octavo of 675 pages, with 319 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5 net; Half Morocco, \$6.50 net.

**PERSONAL HYGIENE AND PHYSICAL TRAINING FOR WOMEN.** By Anna M. Galbraith, M.D., Fellow of the New York Academy of Medicine. 12mo. of 375 pages, with original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$2 net.

**DIAGNOSTIC AND THERAPEUTIC TECHNIC.** By Albert S. Morrow, M.D., Adjunct Professor of Surgery, New York Polyclinic. Octavo of 850 pages, with 815 original line drawings. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5 net.

**A HANDBOOK OF PRACTICAL TREATMENT.** In three volumes. By 79 eminent specialists. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania, and A. O. J. Kelly, M.D., Assistant Professor of Medicine, University of Pennsylvania. Volume II: Octavo of 865 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume: Cloth, \$6 net; Half Morocco, \$7.50 net.

**VAGINAL CELIOTOMY.** By S. Wyllis Bandler, M.D., Adjunct Professor of Diseases of Women, New York Postgraduate Medical School and Hospital. Octavo of 450 pages, with 148 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5 net; Half Morocco, \$6.50 net.

**STATE BOARD QUESTIONS AND ANSWERS.** By R. Max Goepff, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second Edition Revised. Octavo volume of 715 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$4 net; Half Morocco, \$5.50 net.

**A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION.** By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathanie<sup>1</sup> Bowditch Potter, M.D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1229 pages, containing 472 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$6.50 net; Half Morocco, \$8 net.

**THE PRINCIPLES AND PRACTICE OF MODERN OTOTOLOGY.** By John F. Barnhill, M.D., Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine, and Ernest de W. Wales, B.S., M.D., Clinical Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Second edition revised. Octavo of 598 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50; Half Morocco, \$7 net.

# **CATALOGUE ST. LOUIS MEDICAL LIBRARY** **3525 Pine Street**

(Continued from vol. vii, p. 416.)

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- Horner, G. R. B.—Medical and Topographical Observations upon the Mediterranean, and upon Portugal, Spain and other Countries. Haswell, Barrington & Haswell, Philadelphia, 1839.
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- Ibid.—History and Cure of Fever. Murray & Highley, London, 1798.
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- Jacobi, A.—A Treatise on Diphtheria. William Wood, New York, 1880.
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- Jameson, H. G.—Treatise on Epidemic Cholera. Lindsay & Blakiston, Philadelphia, 1855.
- Janeway, T. C.—Clinical Study of Blood-Pressure. Appleton & Co., New York, 1904.
- Johnson, E.—The Result of Hydropathy on Constipation. Wiley & Putnam, New York, 1846.
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### ORIGINAL ARTICLES

#### REMARKS ON THE OCCASION OF THE ANNUAL MEETING OF THE MISSOURI ASSOCIATION FOR THE RELIEF AND CONTROL OF TUBERCULOSIS \*

GEORGE HOMAN, M.D.  
Chairman Executive Committee  
ST. LOUIS

*Mr. President, Ladies and Gentlemen:*—Again the time has come for a look at the twelve months that have passed since the last annual meeting of this body, and for a short account of the work done and left undone since that time.

The success of efforts to keep in active exercise the functions of this body must depend largely on the amount of funds available for this work, and while the financial support received was not large it fortunately developed that a single contribution of \$1,000 from Mr. Adolphus Busch last June enabled the Association to equip a tuberculosis exhibit car and operate it for several months over some of the principal railroad lines in Missouri, and this achievement, the first of its kind in America or elsewhere, it is believed, must stand out as the distinguishing feature of the year.

It would appear that after many years of assiduous effort on the part of the medical profession to teach the public the fundamentals of tuberculosis prevention the time has now been reached when others than physicians should take up this work, and it was with this purpose in mind that the travel method by car demonstration was resorted to; and, it appears, with most pronounced benefit, for in the study of any disease with a view to its prevention it goes without saying that a clear understanding of its nature and cause is of the very first importance, as otherwise the efforts toward its control will be more or less blindly directed, and therefore largely inefficient; and this is especially true of tuberculosis,

commonly called consumption, the form which this disease usually takes in human beings.

Many of the notions popularly held concerning consumption date back to a period when the true nature of this malady was not clearly known, that is to a time prior to the discovery by Robert Koch of the germ which causes the disease, now more than twenty years ago. The survival of these erroneous impressions in the public mind presents at this time one of the most serious tasks that is set before the medical profession and others engaged in teaching the facts and truth as now understood relating to this widely-spread disease—the task being to unteach on the one hand and to build anew on the other according to the light of to-day.

A quarter of a century or more ago much confusion of views existed as to the why and wherefore of tuberculosis and regarding the influences that determined its course and end with, consequently, much of mystery in the public mind which often took the form of rooted traditions, superstitions, obsessions, etc., and these being repeated to consumptive persons added nothing to their comfort, being usually croakings and forebodings of inevitable evil.

But to-day, thanks to forward-moving and discriminating science, the time of mystery in this respect is past and even a child rightly taught can grasp the principles relating to the cause, course and progress of this infection, just as it may learn the processes of vegetable life and growth in the garden or farm at home. For it has been proved that the seeds of this disease are vegetable in their nature and behavior, but peculiar in that they find proper soil in the human lung and other bodily parts.

That the seeds or germs of tuberculosis are so small that they can be seen only with a microscope is a fact which explains why they remained so long undiscovered, and became so widely spread over the world among people who live in cities, or those whose houses are not well lighted or aired, for let it not be forgotten that consumption is a house disease.

\* Kansas City, May 17, 1911.



Vegetable seeds that can be readily seen by the unaided eye range in size from that of the mustard plant to the cocoanut, and it follows that if the seeds of tuberculosis were of the size of the latter, or even no smaller than a hickory-nut or bean, a young child could be taught to recognize the danger and avoid it as something harmful to health or life. That tuberculosis germs are of a vegetable nature is evidenced by the fact that when taken from human expectoration they can be artificially grown on slips of glass smeared with certain substances, then kept at a proper temperature for a certain time, and millions of germs may be thus produced in a garden of this kind covering not so much surface as one square inch.

In persons who have well-developed consumption the growth of these seeds goes on in the natural way, and untold millions may be spat out by the sufferers, either recklessly or in ignorance of the danger to which they are subjecting other people. Therefore, the need exists for the education of the public in order to show them the ever-present danger of such personal habits and practices. It was for this purpose that the Missouri Association for the Relief and Control of Tuberculosis was formed and which now enjoys the distinction of having our honored Governor as its President, and respecting whose active and well-directed interest in this work too much praise cannot be given.

With such means as the Association has been able to command, this work has been steadily pushed forward, although funds have not been available for the support of continuous unflagging efforts. That these were not without good fruits is shown by the generous liberality of the different railroads in handling the Association's exhibit car and staff free of charge, and the other corporations and benefactors who aided in this work in different ways; and, finally, the liberal spirit shown this cause by the General Assembly last winter in making financial provision in various directions for the furtherance and more effective prosecution of antituberculosis operations.

The exhibit car was put in commission by the Association and toured those parts of the state traversed by the main lines of the Frisco Road, the Missouri, Kansas & Texas Road, and some portions of other lines during the late summer and early fall of last year.

The value of teaching of this sort is evidenced in many directions by requests for printed matter, lectures, lantern shows, holiday seals, etc.; and, with a realizing sense of the danger which such knowledge yields, comes the question not only of personal safety against the seeds of tuberculosis both at home and abroad, but the still larger problem of securing community or town defense against danger of this kind. For, plainly, a person diseased with consumption who spits right and left in public or private places regard-

less of consequences is a dangerous factor anywhere, and hence arises the need for a law with proper penalties which shall strictly forbid spitting by anyone, sick or well, on sidewalks and floors or in churches, schools, halls, theaters, cars, and the like, for the probability is that spitings thus deposited will become dried and, floating in the air, be breathed in by everyone subjected to such an atmosphere. It is true that not everyone thus exposed will become infected, for the defensive powers of nature are great in a healthy person, but those predisposed or weakened in constitution by temporary causes will very likely be affected and either slowly or swiftly develop the disease.

Hand in hand with the recognition of these dangers must go local legislation fitted to deal with such conditions and in order to guard all points provisions must be made, by either public or private means, for the proper care of both early and advanced cases of consumption. Those in whom the disease is well developed are most dangerous to the public, while those not so far along are most dangerous to themselves, being often disposed to deny that anything is wrong and thus losing valuable time. Persons in this class should be placed at once in the most favorable situation for recovery, and this means home care, if possible, with clean, fresh air day and night, plenty of nourishing food, quietude, comfort and the like—not dosing with drugs and nostrums, but with wise medical oversight throughout.

However badly affected and poor a consumptive may be, he should never be regarded as an outcast but, for even selfish reasons only, should everywhere be humanely treated and encouraged to refrain from carelessness in the disposal of his bodily discharges. Public institutions must be provided for cases of this kind otherwise uncared for, as to allow them to roam at large is to encourage the spread of pestilence with all the sufferings that tuberculosis in young or old entails on the individual and the community.

An auxiliary influence in this educational undertaking was the organization in September last of the Missouri Commission on Tuberculosis of about twenty members named by the Governor in July, representing the citizenship of the state, and whose deliberations resulted in conclusions favoring the continuance of efforts in the public instruction on tuberculosis by all the approved means and appliances that can be brought to bear.

The influence of the State Sanatorium at Mount Vernon as a school for teaching the hygiene of tuberculosis continues to widen and the power of all these agencies will be increased when the counties shall begin to form districts for the creation of local sanatoriums for all classes of consumption as provided for in Senate Bill No. 472, passed unanimously by the General

Assembly last March in response to the appeal of the Governor.

All of this argues well for the future in this state if the people can be led vigorously to take up the work which has now become their own through medical teaching and example.

Elsewhere encouraging signs are to be seen; the recent action of the British government in proposing antituberculosis legislation which will yield annually many millions of dollars for this cause must have a world-wide influence, and it may be said that almost everywhere a better comprehension of the problems presented and strengthened purpose to overthrow this pandemic disease is in evidence.

#### THE DIAGNOSTIC SIGNIFICANCE OF ABDOMINAL PAIN \*

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That pain is a sentinel ever on the watch to give warning of danger, is true perhaps in the main; but very often fails to indicate the place where the danger in reality exists. Indeed it is not infrequently misleading and may be very illusive as to seat and cause; therefore it is not always a reliable symptom in diagnosing disease, but it is the most pressing, the most important and nearly always ever-present symptom. The study of pain in all its ramifications means the study of all diseases. In discussing such a symptom as pain, no true line of demarcation can be drawn between affections which are usually considered medical and those it is customary to regard as surgical. Although it may, in nearly all cases, be the chief symptom, still many and grave mistakes have been made in not interpreting the pain aright.

It must not be overlooked that many diseases may exist in the abdomen, and for that matter elsewhere, without the presence of pain. Erb says that every increase of sensory stimuli is capable of producing pain as soon as it attains a certain intensity. It (pain) is the reaction of the sensorium to a certain degree of excitation.

Pain indicates a primary cause. The seat of it may be remote from the cause to which it is due.

It may be entirely unassociated with tenderness. In all cases a search for tenderness should be made along the line of distribution of the nerves concerned.

No accurate estimation of the behavior of pain is possible in the absence of a careful study of the temperature of the patient.

Of course the kind of pain should be always considered in each given case as well as the sex, age and previous history of the patient.

Other symptoms are usually present which assist in making a satisfying diagnosis, so that a thorough examination is imperative.

Its sudden or rapid disappearance should never be accepted without reserve on its own account as a sign of improvement. Sudden disappearance or rapid diminution of pain, unless it be coincident with proportionate improvement in the associated symptoms, is not uncommonly a sign of impending disaster. It in no way indicates any subsidence in the gravity of the condition. It may, however, mean the passing of the patient into a more critical state, even to a fatal ending.

Pleasure and pain may be termed the "coefficient of effective and ineffective energy."

It is difficult to define pain. Pain is nature's peculiar and special way of indicating that her normal functions are being prejudicially or injuriously disturbed.

It is nature's indication that her laws are in some way being transgressed and the cause stated as an excessive or abnormal stimulation of a part of the nervous system specially associated with the region affected. (Mayland.)

Every increase of ordinary sensory stimulus is capable of producing pain when it attains a certain intensity. It may be produced either by increase of intensity of the stimulus or by increase of the excitability of the sensorium. It lies in a disturbance of the organization of the nerve at some point in its course.

It is no easy matter, however, to determine its peculiar characteristics and special causes. Many times the surgeon has come to grief in neglecting to discover the initial pain.

There is no reason why persistent efforts shall not be kept up by the physician to become more skilful in its diagnosis. Two conditions obtain: Where the patient feels pain and where the physician discovers and elicits it.

When nerve distribution is considered, it is quite apparent why it is difficult to differentiate pain certainly. Inquiry should be made whether the pain can be increased or augmented by any voluntary efforts or means on the part of the patient. Pain may be neuralgic or inflammatory. Again it may be superficial or confined to the skin, cutaneous, or it may be deep seated. It may be functional or it may be organic. In a given case the pain may be superficial or confined to one side, and deep-seated on the other. Occasionally the area over which pain can be produced by pressure is much larger than the supposed seat of the disease might suggest, due to the dragging of more remote parts on the region affected. Pain should be studied from two viewpoints, viz., from the clinician's and from the patient's.

The pain that is present is not always at the point where the disease actually exists.

\* Oration on Surgery read at the Fifty-Fourth Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



The observations of Head, MacKenzie, Ross, Hilton and others furnish much material for consideration and aid in the elucidation of the subject. It does not seem wise to consider all pains referred or somatic. It is reasonable to suppose that visceral or splanchnic pain does exist. In the one, pain may be other than exactly where the organ is, even as it is quite difficult to differentiate between a surface and deep-seated pain.

Hilton was among the first observers to point out how a deep-seated disease may be indicated by pain in a region where there were peripheral nerves which had a common origin with those that went to the seat of the trouble. He has discussed pain chiefly from a clinical point, while there are others who have attempted to do so from an anatomical.

MacKenzie, to whom much credit is due in the study of the subject, was too insistent in contending that under all circumstances pain in the viscera was a referred pain, or to put it differently, that the pain in disease of a viscus was felt as if at the peripheral distribution of a spinal nerve; that there was no visceral pain. He has claimed that pain elicited by deep pressure over a diseased organ is not that the pressure evokes pain in the organ itself but only in the overlying muscles and subperitoneal tissue.

It was Head, however, who, considering the subject from all aspects, elaborated the segmental explanation of areas of cutaneous tenderness and pain, so that the "somatic distribution of referred pain is not so much along the course of definite nerves as that it corresponds to the cutaneous supply of segments of the spinal cord, from which the posterior nerve roots in part arise." Thus it is very essential to a concrete understanding of the subject to know the sources of origin and distribution of the nerves which will facilitate the knowledge of the cause of pain. A cause may be due to an abnormal distension of a muscular viscus or canal, producing an excessive or exaggerated contraction of the wall of the same, such as colic or colicky pain, which occurs only in hollow organs. It may be due to an irritant of a chemical, toxic or bacterial nature, whether of endogenous or exogenous origin, acting on a serous or mucous membrane. There may be an abnormal distention of encapsulated viscera or invading processes of tumors and aneurysms which may cause either irritation or stretching of the tissues.

A common source of pain is irritation of the parietal layer of the peritoneum. No doubt there are sensory fibers of spinal origin distributed to every viscus or canal which may become irritated by over-distention and contraction. Thus, pains occurring in the alimentary tract, liver, kidney (and the pancreas in some cases), have three fundamental factors: 1. Local spasm in a hollow muscular organ. 2. Local distention of its cap-

sule or walls. 3. Inflammatory processes in their serous coverings; and in the aorta the last two, plus degenerative and inflammatory changes in the wall.

So that the primary cause of abdominal pain or any pain may be the result of over-stimulation or excessive functional activity, and its sensation may be produced and actually felt at the seat of its origin, though it may be often reflected or referred. Care must be taken not to confound the sensation of pain with that of touch. Part of the surface of the body may be anesthetic but not analgesic. As has been said, the pain may be described by the patient as deep-seated in some particular organ or tissue, or superficial as if in the cutaneous structures. The regional pains are variously designated by the patient and of great importance, much more so when associated with deep-seated pain. The well-defined referred, reflected or sympathetic pains may be traceable in their nerve distribution to the same spinal segment as that which supplies nerves to the deep-seated part. The various methods, such as pinching the skin, the use of a point and head of a pin either at one point or drawing the same across the surface of the skin, etc., for locating the painful areas corresponding to certain spinal segments, are of invaluable service.

Every elicitation of superficial pain means nothing deeper than a skin sensation, the local manifestation of reflected or referred pain. From a diagnostic point of view, therefore, it helps only by indicating the deep source from which the pain starts or the particular seat of the primary disease. To put it differently, the particular segment of the cord involved is determined by this means, that segment to which the "afferent nerves come from the diseased organ and from which the afferent nerves pass to the cutaneous hyperalgesic surfaces." It is always to a particular spot within these hyperalgesic areas that the patient points as the seat of the referred pain. This is particularly more evident in reference to algæic manifestations in disease of particular viscera. This is a general proposition of how to diagnose the existence of pain.

Referred pain may exist on the opposite side of the body to that in which the disease or diseased organ is situated. Why this should be, cannot be always determined, any more than why both sides should not be involved, though anatomically it is not difficult to explain. This may be the case in any disease affecting a deep-seated region—not a few instances can be recalled. This may be, in any disease affecting deep-seated tissues or parts, as for example renal disease; so in appendicular involvement the pain may be on the left side, though deep-seated pain and tenderness may be elicited by palpation on the right side. Pain may be more widely distributed than is represented by the deep seat of the disease. If a referred pain, it should be borne in mind that,

even though a particular segment of the spinal cord is the means of receiving impressions and distributing them, there may be excitation of an adjacent segment of the cord to produce the pains more distantly. This may occur by reducing the resisting power of the adjacent segments as in anemia, in pulmonary tuberculosis; or by increasing the excitability of the segments involved, as in fevers by raising the general sensitiveness and excitability of the nervous system, or by prolonging or increasing unduly the stimulating power, as in chronic localized disease such as in ovaritis.

And in this connection it will not be out of place to mention an instance of remotely distributed pain in organs that may be said to possess certain special functional relationships, as in diseases of the ovaries and breast. They are difficult to explain on any anatomical basis and may be likened as it were to echo pains. No doubt there are many others of a similar character. An endeavor should be made to seek for the earliest manifestations of pain with all the attending symptoms, and not too hastily regard the distributed pains as depending on hysteria or nervousness.

It will be seen that the physiology and anatomy of the nervous system is absolutely indispensable to the proper study of the subject of pain.

It is not the purpose of this paper to take up each organ or region and discuss the symptoms, but to emphasize in general the characteristics of pain.

If there are distinctive pains of any particular disease they, for the most part, belong to the deep-seated class, which can be frequently elicited.

In diseases of the stomach, both functional and organic, the pain is not distinguishing; indeed, it may be misleading, and in no other organ probably does it become more necessary to consider the associated symptoms. The pain is the result of many local disturbances which have the same seats both deep and superficial.

There is nothing distinctive of duodenal pain, either in its character or in its seat. Neither can it be said there is any hard and fast line between the seat and character of the pains in diseases of the rest of the small intestines and most of the large intestine because of the nerve supply, viz., by branches from the superior mesenteric plexus which supplies all the small intestines and much of the large.

The law which states that in a general way organ pains correspond in localization to the organ from which they emanate is borne out by pancreatic conditions. So, because of the chiefly left-sided position of the pancreas, the pains which arise in it are situated in the left half of the epigastrium to the left of the umbilicus, or even in the left groin. Occasionally with these, radiations may be observed which are symmet-

rical with those occurring in gall-bladder or duct disease.

In considering pain in connection with diseases of the appendix, it will be well to recall that they are of two classes, the acute and chronic. The nerve supply is from the mesenteric plexus and from the ninth, tenth, eleventh (twelfth) dorsal segments. The pain is first felt in the epigastric or umbilical region and then passes to the right iliac fossa. The pain will depend on the location of the body and apex. Indeed it is not known what starts the pain, though the supposition is, it occurs only when the peritoneal surface becomes involved while the initial pain usually is manifest in the epigastrium or umbilical region and secondly in the right iliac fossa; it is sometimes referred to the left iliac fossa, and occasionally over the whole of the abdomen. Cases, however, of extreme gravity, coexist with comparatively slight initial pain, as in gangrenous appendicitis. It is not uncommon in a given case for the pain to be diffuse, the symptoms indicating uterine adnexal disease on the one hand, and gall-bladder and ducts on the other or both, involving all the above structures. The fact probably of most clinical importance to remember is the frequency with which appendicular pain is felt on the left side, although the affected organ occupies its normal position on the right side. The pain is referred (though there have been cases where the appendix has been found in the left iliac fossa). It should be remembered not to make doubt worse confounded by the careless administration of a narcotic, as instead of clearing up the horizon, it is but oftener rendered more cloudy.

In women, retroversion more often causes pain on the left side than on the right; so, too, in cancer of the uterus. Often it is very difficult to determine the value of pain in connection with the female reproductive organs, but this is partly explained when the physiology and anatomical nerve supply is duly considered. As in the case of ovarian pain, so in diseases of the tubes, the pain may be referred to the side opposite to that in which the disease is located. An explanation is that, owing to the lesser strength of the left side of the body, pain is more common on the left side. It is claimed that in certain displacements of, and in cancer of, the uterus pain is more often felt on the left side than on the right. Indeed, pain in the right iliac fossa may have reference to some disease of the pelvic viscera as much as it may be connected with disease of the appendix caeca, or other part of the large or small intestine or even the gall-ducts or gall-bladder. And it is well to remember that cancer is more frequent in the splenic curvature of the large intestine than in the hepatic, and more common in the descending than in the ascending colon.

No doubt many will recall such cases. Patients have been operated on for abdominal disease on



account of abdominal pain without finding any sign of disease whatever there: the disease has been elsewhere. It is all important to recognize the possible significance of a special kind of pain in a particular region, but it is not always possible. Valuable time is lost through delay in ascertaining the cause of the attack, the proper recognition of the gravity of the symptoms being the most important factor.

The conclusions to be deduced from the study of abdominal pain are, namely: to bear in mind that pain in itself does not tell the whole story, but merely puts the physician and patient on their guard. That there is grave danger following the administration of narcotics which have a great tendency to mask the true condition. That pain is not infallible as to the site of disease. That the initial pain is, in many cases more important than the subsequent diffuse pain that follows. That it is the duty of the physician to educate his clientele relative to abdominal pain, especially should it be the province of that type of medical man—the family physician—who is rapidly disappearing, *triste dictu*, to inform the laity of the significance, the danger mayhap, of the neglect of bellyache or abdominal pain.

The doctor cannot talk too freely about medical matters, especially those that pertain to the health of the family and the community. It should be his endeavor to enlighten the body politic on sanitary and hygienic matters. The public should feel that the medical profession wishes it well: and must necessarily as it is a part of the community. Is he not subject to the same diseases, healed by the same means? If you do prick him, does he not bleed?

Among the authors whose works have been consulted in the preparation of this paper are: Hilton, MacKenzie, Ross, Head, Erb, Griesinger, Mayland, Janeway, Bennett, Boas, Corning, Roosing, Bronson, Gelbridge, Riedel.

#### THE DEATH OF THE FETUS IN UTERO\*

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Understanding that the purport of the symposium to-night is one bearing on the causes of fetal death during the latter months of pregnancy, I will limit my remarks to death in utero occurring after the twenty-eighth month of pregnancy and thereby exclude such etiologic factors that may result in death before the period of viability.

Fetal death in utero may be classified etiologically as resulting from (1) paternal, (2) maternal, (3) fetal, (4) causes attributable to the annexes of the fetus, the membranes, pla-

centa and cord, and (5) deaths due to external violence.

Under paternal causes we have conditions such as produce great debility in the father, that is extreme youth, old age and alcoholism; conditions which are liable to manifest themselves in a low degree of vitality in the offspring, and which may, before time of birth, produce the death of the embryo; while alterations in the semen due to phthisis, albuminuria, diabetes and other chronic diseases, as well as chronic poisonings, may all tend to cause the same lowering of vitality. Yet the latter have a more specific action and cause fetal death by the inherent weakness of the spermatic particle, and though this may not be sufficient to prevent conception, it nevertheless renders the embryo incapable of development beyond a certain point. Syphilis as a cause of fetal death, whether emanating from the father or mother, will be mentioned later in the article.

The maternal influences leading to the death of the fetus in utero are many, but only the more important will be mentioned, especially those which can, if timely recognized, lead to correction either at the pregnancy in hand or in following pregnancies.

Maternal causes lend themselves far more satisfactorily to proper treatment than do causes emanating from the fetus itself or from its annexes. Under this head come the acute infectious diseases which kill the fetus by direct action of the poison transmitted through the placenta; by placental hemorrhage or by their resulting high temperatures. Runge,<sup>1</sup> who has done much interesting work in this direction, asserts that the fetus sympathizes with the mother both as regards morning and evening temperatures, and proves the noxious influence of elevation of the maternal temperature on the fetus. His conclusions are: 1. The temperature of the fetus is always a few tenths higher than that of the mother. 2. The fetus is killed by the elevation of the temperature alone, even before the mother dies. 3. A maternal temperature of 107° F., even though lasting but a few minutes, will inevitably kill the fetus. It may in itself also produce uterine contractions.

Systemic poisoning by metallic substances, chronic intoxications, chronic infections and chronic diseases, such as carcinoma, nephritis, diabetes and nervous conditions, all with their resulting anemias, cause repeated deaths due to lack of sufficient nutrition required by the growing fetus, and due to morbid conditions of the blood-vessels and blood in the fetal placenta. Such disturbances as chronic diseases of the heart, lungs, liver and kidneys, may destroy the fetus by producing chronic congestions in the placenta, with imperfect aëration of the fetal

\* Read at the meeting of the St. Louis Medical Society, Section on Obstetrics and Diseases of Women, March 28, 1911.

1. Runge: Cyclopedia Obst. and Gyn., ii, 302.

blood. Conditions of the uterus and its immediate surroundings may in many ways cause fetal death and interrupt pregnancy, especially is this true in acute and chronic endometritis, by abnormal and low positions of the ovum, or by such an active growth of the decidua that the nutritive blood-supply is so diverted from the fetus to the uterine mucosa that the former perishes.

Metritis,<sup>2</sup> due to its excessive development of fibrous tissue, prevents, in the body of the uterus, the proper elasticity and interferes with the sufficient dilatation of the uterine cavity. Myomata, neoplasms, versions and flexions and uteri septi may all act in a similar manner, causing the fetal death by a limitation of its development in a space too contracted to allow of its due expansion.

There are certain women who, after reaching the eighth or ninth month of gestation, without the slightest disorder, suddenly notice a diminution of the active motions of the fetus. This is followed by the death of the child. This condition, as in habitual abortion, is probably due not so much to a maternal constitutional predisposition, the result of habit, as was formerly believed, but to a continuance of some specific and unrecognized cause. When the cause is discovered treatment must be carried out on its appropriate lines, whether due to syphilis or to the continuance of the morbid condition that determines the death of the fetus. While syphilis still holds and probably will for some time hold the first place as the causative factor in habitual deaths of the fetus, the following causes stand out prominently, many of them lending themselves to proper treatment after recognition and thus overcoming the usual continuance of the repeated performance. After syphilis, the causes contributing to the habit are maternal uterine displacements, uterine diseases and diseases of the uterine appendages, maternal anemia, chronic cellulitis and peritonitis, lacerations of the cervix, intermittent fevers, chorea, Bright's disease, tumors of the uterine and its adnexa, poisoning from metallic substances and reflex conditions, the latter coming either from the nervous system in general, or from the uterus and appendages in particular.

The causes of fetal death emanating from the fetus itself and its annexes are particularly numerous; hence only a general classification and allusion will be given the subject.

Fetal deaths result from: (1) Diseases and poisonings, acute and chronic; (2) injuries and (3) faulty development either in the fetus itself, or in its annexes, also from degenerations of the placental villi, extravasations and effusions of blood into the placenta and its membranes,<sup>3</sup> all of which will more or less interfere with the nutri-

tion of the embryo by causing partial or complete separation of the placenta. Amyloid and fatty degenerations of the placenta produce the same result. Likewise any condition that interrupts the circulation of the cord must be disastrous to the nutrition and eventually to the life of the fetus.

One of the most interesting conditions, and one which the practitioner is entirely at a loss to correct, is a condition of knots and torsions of the umbilical cord.

Knots of the umbilical cord occur either as false or true knots. The false being merely the result of a local increase of Wharton's jelly and are of little significance. True knots usually occur in abnormally long cords or where the liquor amnii is very abundant. They may be single or multiple, cases having been reported where as many as five true knots were found. They are the result of fetal movements, movements of the mother, or uterine contractions, and occur during pregnancy or when a fetus descends in labor. In recent knots there is no displacement of Wharton's jelly and no constriction of the cord, consequently the effects of these knots are practically nil until tightly knotted. With the occurrence of a tightening of a true knot, there is a displacement of Wharton's jelly, and a lessening of the diameter of the cord. The vessels are so tightly constricted as to completely shut off the placental circulation, and this either hinders the development of the fetus or acts as another cause of fetal death. It is claimed that the incessant repetition of the shock of pulsation favors the loosening of a tightened knot.<sup>4</sup>

Torsions of the umbilical cord occur in two forms:<sup>5</sup> 1. The characteristic or universal, presenting a very considerable number of twists distributed evenly over the entire length of the cord. In one case of Kuestner<sup>6</sup> 168 complete twists were found, while Shauta in another case found 380. In these cases the greater number of torsions were found in long cords, mostly perpendicular to the long axis of the cord, and evenly distributed. When occurring at either end of the cord, the fetal skin, or a great portion of the vessels of the placenta, is drawn outward into the torsion. The twists may become very adherent, incapable of being untwisted. Where so many twists occur, the lumen of the vessels is necessarily narrowed, or even totally obstructed.

2. The circumscribed. The torsions are present only in a particular portion of the cord, and consist of one or several turns, the remaining cord being normal. The jelly in this place is fully absent, the cord exceptionally thin, the twists so extensive at times that the cord at the point of twisting is narrowed to the thick-

4. Practice of Obstetrics, Edgar, Ed. 3, p. 238.

5. Handbuch der Geburtshilfe, Von Winckle, ii, 3, p. 1481.

6. Handbuch der Geburtshilfe, Von Winckle, ii, 3, p. 1482.

2. Cyclopedia of Obst. and Gyn., Wm. Wood & Co., ii, 302-303.

3. Winckle's Text-Book of Midwifery, Edgar, p. 329.



ness of a ribbon, or fully separating the fetus from the placenta; the vessels fully constricted or greatly stenosed. This kind of stenosis is found more often near the fetal end of the cord. The various opinions of authors as to whether the occurrence of the torsion is *intra vitam* or *post mortem* are many and conflicting. Yet for the occurrence of the universal as well as the circumscribed, the fetal movements are responsible, a fact which supports the adherents of the *intra vitam* theory, even though the occurrence of torsions is influenced in part by the maternal movements and uterine contractions after the death of the fetus.

It is of great importance that the practitioner should become thoroughly familiar with the characteristic lesions of fetal and placental syphilis, as many cases occur where no evidences of the disease are recognizable in either parent, and all knowledge of the disease is denied. In such cases with the birth of a dead fetus we have the first suspicions and evidences of lues in the parents, and upon the recognition of this depends the entire future treatment of the patient. A short survey of some of the signs of antenatal lues is marked by a poorly developed and undersized fetus, absence of the subcutaneous fat, the skin grayish and marked by abrasions, glistening of the soles of the feet and eminences of the palms, characteristic lesions of pemphigus and later maceration. In the liver is found a marked increase in size, hypertrophic cirrhosis, the weight increased from one-thirteenth to one-eighth of the body-weight. Microscopically, increase of connective-tissue surrounding the individual lobules and acini, scattered areas of round-cell infiltration, and the occurrence of spirochetes. The spleen is also increased in size, weighs two or three times as much as usual, the microscopic changes being similar to those in the liver. Changes occurring in the bones are very apparent macroscopically. Changes occur at the junction of the epiphyses and diaphyses in the long bones. Normally the two are separated by a narrow, whitish, slightly curved line, 0.5 to 1 mm. in diameter, this line representing the area of preliminary calcification. In syphilis this undergoes characteristic changes, becoming converted into an irregular, jagged, yellowish line, two, three or more millimeters in thickness, also associated in advanced cases with considerable softening and the formation of a soft pultaceous material, which occasionally leads to a complete separation of the epiphyses. In syphilis these changes due to osteochondritis are mostly seen at the lower end of the femur and fairly well at the lower end of the tibia and radius.

Placental syphilis<sup>7</sup> and its recognition become important, as in many cases fetal post-mortems will be refused, and the only means of information will arise from a careful examination of the

fetal placenta. Its changes are characteristic, being larger in size, paler in color and of a dull greasy appearance in a dead fetus. The size, instead of representing one-sixth of the body-weight, reaches to one-fourth or more. The villi when teased out in salt solution are found to have lost their aborescent appearance, and are thicker and more club-shaped.

A review of the recent literature shows no cases of habitual death of the fetus due to syphilis, having been corrected by "606," yet it will no doubt in the near future receive its due attention. Causes of death due to external violence are many, and at times become of great importance from a medico-legal standpoint. Deaths occurring during pregnancy must be distinguished from deaths resulting from fetal birth. It is also a well-established fact that a child can be killed in utero by accident, the mother surviving the injury, the child succumbing.

Fritsch<sup>8</sup> in Mueller's "*Handbuch der Geburtshilfe*" reports several most interesting cases.

For the determination of fetal death we have the signs first noticed by the mother, then those observed by the obstetrician both as concerns the mother and the state of the fetus. Observations and sensations on the part of the mother are an absence of fetal movements, heaviness and coldness in the lower abdomen, the feeling of a foreign body in the abdominal cavity, which changes positions with the maternal movements; also a general feeling of coldness or real chills may occur, the breasts are noticed to become smaller, the gradual abdominal enlargement ceases to be noted and becomes stationary or sinks, due to lack of tonicity of the uterus and lacking the resistance of the fetal parts: there is a vague feeling of malaise and languidness characterized by loss of appetite, feeling of lumbago or fatigue, with possibly, in women of delicate nature, a slight evening elevation of temperature. On the part of the obstetrician is noted the absence of fetal heart sounds established after repeated trials, an unusual flabbiness of the uterus, instead of the normal resiliency and compressibility, absence of uterine contractions, a possible discharge of meconium, fetid discharges, or flatus<sup>9</sup> from the uterus. Vaginal examination reveals little, as after maceration has occurred the small parts are difficult to feel. The uterus may be hard to differentiate from an abdominal cystic tumor. Knapp<sup>10</sup> claims to have found acetone in the urine, but it has not been confirmed by later experiments. When the cervix admits a finger the relaxed and overlapping condition of the fetal skull bones may be palpated.

The effect on the mother is practically nil with the exception of the few clinical symptoms mentioned above, unless the fetus undergoes putre-

8. Fritsch: Mueller's *Handbuch der Geburtshilfe*.

9. Simpson: *Obstetrics*, page 39.

10. Knapp: *Centralblatt f. Gyn.*, 1897, No. 16, S. 417.

7. *Obstetrics*, Williams, p. 515.

faction with absorption of the small parts, the bones then by ulcerative processes attempting to be discharged through the bladder, vagina or rectum, or externally through the abdominal wall.<sup>11</sup>

#### SOME RECENT STUDIES IN ECLAMPSIA\*

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We may reject the dictum of the witty French savant: "Woman only escapes being sick twelve times a year by having a sickness which lasts nine months." Still, as Professor James Ewing, the distinguished pathologist of Cornell, said in his address before the joint meeting of the Philadelphia Obstetrical and Pathological Societies, Feb. 10, 1910, "It is a curious mal-adjustment of nature which places pregnancy among conditions difficult to separate from the pathological." All of us remember the poetic stories of how the Indian woman excused herself from the caravan and after the birth of the papoose washed him in the purling brook, slung him on her back and overtook her tribe on the march, but reports of competent medical officers stationed on the frontier have placed a new side to this picture by showing that many of these women with their helpless young were abandoned and died—a pathetic illustration of the survival of the fittest and the sacrifice which maternity imposes on the female members of all animal life. To quote again from Ewing: "Obstetrics in India, China and Africa deals with the same ponderous processes and meets the same formidable hazards as in Europe and America. The comparative study of gestation reveals throughout the animal kingdom a lethal tendency, reaching the acme in certain orders of insects in which ovulation necessarily entails death." The researches being carried on in the various laboratories connected with the obstetrical and pathological departments of our great universities will eventually devise means to protect maternity in the human female to the highest point of efficiency.

Among the studies which have brought new light on the pathology of pregnancy, and especially that connected with eclampsia, are those of Jurgens, who in 1896 showed the anatomical changes of the hemorrhagic hepatitis of eclampsia; and Schmorl (*Archiv für Gynäkologie*) makes an endeavor to establish a sharp line of distinction between eclampsia and other pathologic conditions of pregnancy.

Three recent cases of pernicious vomiting of pregnancy in rapid succession, as well as one of acute yellow atrophy, have called my attention to the associated symptoms of the pre-eclamptic state and those of pernicious vomiting, all the

symptoms of which, in their beginning, come under the same classification, and point to an intoxication similar in character. Lindermann in 1892 showed pathologic changes in the liver being associated both with the disorders of pregnancy and the fatal lesions as well. He referred the vomiting and salivation to degenerative changes in the central and peripheral nervous system, claiming multiple neuritis and advanced lesions in the liver and other organs as being resultant from the same poison. Thirty-eight cases of neuritis, associated with hyperemesis, were collected by Eulenberg in 1895 and these cases form the basis of the argument which includes the liver as being involved in all the various auto-intoxications of pregnancy. Thus the liver comes to share with the kidney in the disaster with which pregnancy threatens the woman.

Fifty years ago Von Frerichs pointed to the liver as the probable offender in the disorders of pregnancy, both mild and grave. Throughout all the tumult of discussion during this half century these findings have stood out in perspective, both in acute yellow atrophy and malignant jaundice, as well as in eclampsia. The clinical symptoms and anatomical lesions became clear-cut through his remarkable contributions to the Transactions of the Sydenham Society.

The kidney of pregnancy, described by Leyden, established itself as a constant factor in the pathology of eclampsia and it is recognized clinically through its classical phenomena before any other symptom is found. The kidney of pregnancy is one of fatty degeneration, while associated with it are degenerative changes, exudative nephritis and widespread necrosis, reaching almost complete destruction in some instances. While not peculiar to pregnancy these symptoms are, in severity and extensive results, unequalled in any similar auto-intoxication.

The rôle played by the syncytium in the production of the various toxemias of pregnancy has been enthusiastically heralded as the important discovery in the mystery of pathologic pregnancy. It is the opinion of Williams, that while there is a marked proliferation of the syncytium in the placenta which Bulius and Folk considered characteristic, that his own investigations and those of other obstetricians and pathologists did not confirm these results in the eclamptic placenta which were examined by them.

Hirst says that while the several theories advocated at the present start with the common assumption that the ovum or fetus is the source of toxins which contaminate the maternal blood, he frankly confesses that what these toxins are and where they originate is still unknown. Kallman points out that the fibrin-forming elements of the blood are much increased in eclampsia. To these globulins, albuminous, large molecular bodies which furnished the excess of fibrin is

11. Text-Book of Obstetrics, Hirst, p. 171.

\* Read at the Fifty-Fourth Annual Meeting of the Missouri State Medical Association, Kansas City, 1911.



ascribed to the toxicity of the maternal blood. There is much to support this view. Experimentally these substances have been demonstrated to be toxic, producing eclamptic symptoms. The negative result of cryoscopy of the urine of eclamptic patients indicates that there is an excretion of high atomic, large, molecular substances; whether these substances, if they are the toxins of eclampsia, are derived from the fetal metabolism or from the syncytium of the placenta is disputed. Hirst favors the view of fetal metabolism for the reasons that the toxemia of early pregnancy, which is probably due to the syncytial growth, differs in its clinical manifestation from the toxemia of the latter half of pregnancy: as eliminative treatment and dietetic management, to spare the kidneys and liver, favorably influence the toxemia of the second half of pregnancy, but have no influence on the first half. The symptoms of the toxemia of the latter half of pregnancy usually disappear with the death of the fetus; in multiple pregnancies, albuminuria and eclampsia are ten times more frequent than in single pregnancy; in hydatiform mole, with its enormous overgrowth of the syncytium, the occurrence of eclampsia is rare, only two cases having been recorded. This argument seems most logical and advanced, covering the part played by the syncytium in the etiology of eclampsia.

How much weight is to be placed on Nicholson's statement concerning the thyroid, furnishing the antibody for the toxins of pregnancy, or that of Trommer, suggesting the parathyroid, is problematical. George Wood in his ingenious paper, "The Syncytium, the Probability of a Primal or Universal Antitoxin," says: "After the growth and formation of the placenta, when the embryo becomes fetus, the blood of the mother generates in the serum antibodies which antagonize the invasion of the syncytial tissue, the presence of syncytial elements in the blood determines the formation of a special cytotoxin, in this instance called syncytiotoxin. An organism has the power to prevent excessive proliferation of these fetal cells or chorionic elements, and thus to keep a cytolytic equilibrium. Thus the toxin and the body antagonizing it on the maternal side, is designated antisyncytiotoxin. This antisyncytiotoxin has the power to dissolve or render inert any syncytial tissue in excessive proliferation." He attributes all toxemia of pregnancy to one of two causes: first, there is a defect in the structures or function of the syncytium, and second, there is an excess of syncytial cells or enzymes in the maternal system. Under the first class come morning sickness, albuminuria, and eclampsia; under the second, pernicious vomiting and acute yellow atrophy.

The placenta is not normally poisonous, as it is eaten by many animals after its expulsion from the uterus. Wood suggests from this fact,

and the fact that among animals toxemia of pregnancy is almost unknown that there may result from the ingestion of the placenta or syncytial tissue antibodies which confer an immediate and transmit an inherited immunity from such toxemia. Therefore, he argues that the next therapeutic advance will be the making of syncytial serum which will confer the same immunity on womankind.

The syncytial theory is plausible and attractive, but with the opinion of Hirst, Williams and Ewing to the contrary few will have the temerity to maintain the position as to its universal application in the etiology of the toxemia of pregnancy.

Owing to the fact that we have all noted the unstable nervous system of the pregnant woman, observers have been willing to ascribe to this factor many or all of the disorders and even fatalities of gestation. There is no doubt that functional activity of the nervous system is lowered in pregnancy and this greatly influences the symptoms.

Nervous irritability forms a part of the abnormal physiology of gestation, but that any form of intrinsic neurosis could account for the occurrence of yellow atrophy, pernicious vomiting, or eclampsia, is a supposition now abandoned. The unstable nervous system is the medium of expression of some symptom of disturbed function of other organs, but the nervous system does not originate them, although it aggravates many.

To group the common changes which occur in what passes as normal pregnancy: lesion in the chief excretory organ, the kidney; in the main organ of metabolism, the liver; and functional instability of the nervous system, the great organ of the expression of symptoms. The kidneys in pregnancy may become insufficient for the work of disposing of excrementitious waste from both maternal and fetal bodies, by reason of the kidney of pregnancy; of nephritis; of increased intra-abdominal pressure, and direct pressure on the ureters. Dührssen says five per cent. of eclampsia is reflex and not toxic.

It is important, says Hirst, to appreciate in practice the difference between kidneys diseased and yet functionally sufficient and those healthy anatomically, but functionally insufficient for their double duty. Massen's researches, showing leukomains, and Kallmann's increase of globulin in the blood-serum, Williams says, have not been confirmed. The theory of Dienst and Fehling that the intoxication of the maternal body by products of fetal metabolism to the increase of which the organism could not accommodate itself, so that poisonous materials accumulated and gave rise to organic lesions in the mother, is borne out by the clinical evidence that the convulsion ceases as a whole as soon as the fetus and placenta are delivered.

It is claimed also in the argument favoring the fetal origin of eclampsia that the child sometimes has convulsions soon after it is born. Lesions similar to the organic change in the maternal structures are occasionally found post mortem in the liver and the kidneys of the child born dead, or dying soon after its birth.

The rest nitrogen in many cases of toxemia, found by Ewing and Wolf, was considered by them a very significant feature of the urinary change. They examined the urine of many normal subjects and found that when the rest nitrogen in adult men on mixed diet rises above 1 gram, or about 15 per cent., these subjects have indigestion, constipation, headache, migraine, nervous irritability, urticaria and pruritis. Others report similar manifestations. Hence in all these cases the high rest nitrogen must be taken as an indication of defective metabolism and not an unimportant peculiarity of normal metabolism without clinical significance. He logically concludes that the comparison is not to be made between the subject and "healthy" men, on starch cream diet, but with the same subject when free from toxic symptoms. It was remarked that the rest nitrogen dropped from so high to relatively low a figure when their cases became normal that they were disposed to assume some connection between high rest nitrogen and the production of the symptoms.

Edsall says that the diminished excretion of urea, late in pregnancy, may be due to the retention of nitrogen for the purpose of building up the tissues of the fetus; to the fact that the woman is taking very little nourishment, or that elimination is below par. It is absolutely impossible in any particular case to identify the cause. Bacon regards albuminuria with edema of value as indications, while Davis takes the deficient excretion of urea as the safest urinary guide. In making the diagnosis of eclampsia, therefore, these various symptoms are to be weighed in their relative importance. Mayerwicz says: "In diseased kidneys there is more likelihood of insufficiency than in healthy kidneys, therefore eclampsia should always be feared if there is any sign of disturbance during pregnancy." In more than four-fifths of the cases gestational toxemia is first manifested by marked and increasing albuminuria. In the latter half of pregnancy Hirst says increasing blood-pressure is the most constant symptom in gestational toxemia and the invariable precursor of eclampsia. I believe every practitioner attending obstetrical patients should have a sphygmometer and it should be as much a practice to keep track of the blood-pressure as to measure the pelvis or to examine the urine.

The volumes of medical literature which have been written on the subject of eclampsia and afterwards repudiated by volumes quite as convincing fully justified Zweifel when he said: "Eclampsia is a disease of theories."

In the limit of a paper of this length it is not possible to cover all the historical theories, the statistical minutiae and methods of treatment which are as various as the theories themselves. The standard text-books and experience in practice give the symptoms which, once observed, are never forgotten.

It is to be borne in mind in addition to the pathology which has been so clearly shown to implicate the kidneys and liver, that Herzfeldt in 1901 found in eighteen out of eighty-one cases dilatation of the ureter by compression at the pelvic brim. In the liver, kidney, brain and lung many thromboses of small capillaries appear, with extravasation and areas of necrosis. Emboli of liver cells are found in the important organs; the myocardium shows degeneration; edema, or pneumonia is found in the lungs. Infection may result from foreign material passing from the mouth to the lungs. In the lungs Schmorl also found emboli of giant polynuclear cells, which he traced as being from the placental villi, having demonstrated their exfoliative absorption from the intervillous blood-spaces into the circulation. He shows the passage from the heart to the lungs where arrest occurs, they being too large to pass through the capillaries. Schmorl attributes eclampsia to exfoliation of these giant cells, but Pels Lensden claims to have found these giant cells in lungs of non-eclamptic patients.

It is asserted that the statement that only 5 per cent. of women with diseased kidneys becoming pregnant develop eclampsia, is not strictly true, as a matter of fact only a small minority of women with diseased kidneys escape in their pregnancy some toxemia. Thus the prognosis is grave even to-day. The statistics, as quoted by Moran of the Columbian Hospital, Washington, D. C., showing a mortality of 25 per cent. and the reports from most of the large maternity hospitals do not vary much from these figures. The immediate fetal mortality remains about 25 per cent. and half of those who survive perish from the ills of early infancy.

The fetal mortality is of itself an appalling loss and calls for the most careful consideration. The death of the fetus in utero is said to be caused by disturbance of hematosis during the attack, or by the toxemia. If born alive it may die subsequently of congenital feebleness, hemorrhage or convulsions. As stated, post-mortem examination has shown in infants, dying in eclampsia, visceral lesions, particularly in the liver, similar to those observed in the maternal organism. The toxic substances found under ordinary circumstances omitting bacterial ptomain poisoning come from three sources: the food, intestinal fermentation and catabolic change of cell nutrition (malassimilation).

Potassium is the chief mineral constituent introduced into the body with the food. So far as these toxins are concerned, pregnancy does not



increase or decrease their effect, except as to constipation, which by preventing elimination may favor their absorption. The production of toxic substances within the alimentary canal is not disputed. Besides direct demonstration it has been shown that urinary toxicity is in part related to chemical changes going on in the intestinal canal. The discovery of indican, compound phosphates and unoxidized sulphur compounds suggests intestinal fermentation. This fermentation is a factor, showing itself by an increase or decrease of these substances in the urine. Constipation so commonly an aggravated symptom of pregnancy has been involved as a cause of eclampsia.

Of all the sources of poison in the organism this malassimilation of cells themselves is the most important. Andral and Gavarret have shown that in the pregnant woman less oxygen is absorbed and carbonic acid eliminated than under ordinary circumstances. This presupposes subnormal oxidation of intricate cellular processes. Glycosuria and increase of adipose tissue are relatively frequent. Glycosuria may be imputed to disturbance of the liver function which normally stores up sugar in the form of glycogen, but which, on account of fatty degeneration induced in pregnancy, it may be unable to retain. Defective elimination will in part account for the toxic accumulation. The degree of urinary toxicity is sometimes reduced very markedly, which might show a defective renal elimination.

Experimental investigation shows also deficient elimination, intestinal, biliary, cutaneous and pulmonary. In addition to these two sources of accumulation of toxins in the organism the third factor, defective capacity, should be borne in mind.

Theoretically, it is very clear that toxic substances may accumulate if the ordinary process in the organism for their destruction is deficient. The liver is the chief engine for accomplishing this end. It is intimately associated with the destruction and rendering innocuous of the poisonous substances elaborated within the body. The liver during pregnancy undergoes modifications which reduce its antitoxic function.

Fatty infiltration occurs which interferes with its physiologic function.

The accumulation of glycogen in the cells of the liver toward the end of gestation offers an obstacle to the normal hepatic parenchyma. The intestinal mucosa, the spleen, thyroid and suprarenal glands undergo changes which are sufficient to undermine their protective action in the poison-destroying power, which is normally exercised.

Williams believes that there are at least two toxemias of pregnancy, one associated with acute yellow atrophy, the other with eclampsia, and the contention is based on the pathologic anatomy

of the two conditions, clinical studies and metabolism. In eclampsia, he states, the lesion begins in the portal spaces and invades the lobule from the periphery toward the center, while in pernicious vomiting and acute yellow atrophy the necrosis begins in the center and spreads toward the periphery, but never involving the portal spaces.

Since pulmonary edema, pneumonia, cerebral hemorrhage and nephritis are ascribed as the direct cause of death in the great majority of cases the value of an early diagnosis and prophylaxis cannot be too strongly emphasized.

Prophylaxis involves hygienic, medical and dietetic measures. Pulmonary ventilation, nourishing food, frequent bathing, moderate exercise in the open air, proper clothing, avoidance of fatigue, excitement and exposure to cold are the principal hygienic measures. All pregnant patients are entitled to more than the perfunctory examination of the urine for albumin in the later weeks. The total amount of solids secreted should be known and the constitutional signs and symptoms kept in mind. Intoxication shown by digestive disturbances and headache should be corrected by regulation of the bowels and restriction of the diet. Persistent headache, vertigo, vomiting, insomnia, disturbance of vision and neuralgia, all these show involvement of the nervous system and call for more active measures.

Free purgation, hot baths, rest in bed and absolute milk diet are now indicated. Diuretics are of far less importance and not to be considered, except as of secondary use after the bowels and skin are freely stimulated to action. The medical treatment includes general remedies as anesthetics in the convulsion, diaphoresis and catharsis in the interval. Chloroform was formerly the sheet anchor, but it is now to be regarded as the one anesthetic not to be employed. It is to be borne in mind that chloroform causes severe hepatic lesions in many cases, according to Ewing. Bevan conducted a number of experiments on dogs which showed that fatal chloroform poisoning produced in the liver the identical lesions of eclampsia. How many deaths, then, may have been due to the remedy rather than the disease. Moran says: "While chloroform masks the horror of the picture it adds fuel to the flames, aggravating the difficulty in the supply of oxygen and being a cardiac depressant, the organ having already undergone degeneration and the blood containing other toxic material." These objectionable features, together with its deleterious effect on the kidneys should always restrict its administration to the time it is actually necessary to intervene. Its use may be tolerated as an adjunct, but nobody could to-day depend, as Charpentier did on chloroform alone, as a specific in the treatment of eclampsia. Indeed a number of careful observers condemn the use of chloroform in any amount in

eclampsia, attributing a large mortality to its exhibition rather than being due to the toxemia alone.

The use of diaphoresis and catharsis are our most valued quick means of rapid elimination. The portable sweat cabinet recommended by Hirst is simple and efficient. Hot packs and hot baths are to be used in absence of the cabinet. Normal salt solution should be injected into the subcutaneous cellular tissue or under the breast. It is an indispensable aid to elimination, literally washing impurities out of the blood. If, however, sweating and purging are not at once accomplished the salt solution may tend to pulmonary edema. This caution is one which should be borne in mind constantly and is the indication for the saline.

Catharsis is best induced, according to our best American authorities, by croton oil, a drop in sweet oil, on the base of the tongue, in case the patient cannot swallow. Elaterium ( $\frac{1}{4}$  grain) may be administered the same way. If the stomach is washed out an ounce of castor oil and two drops of croton oil may be put into the stomach through the tube. If the patient can swallow a concentrated solution of epsom salts, a dessertspoonful every fifteen minutes for three or four doses will be worth while, as it will often clear the stupor which succeeds the convulsions in which the patient dies of toxemia.

In cases of pre-existing heart disease or nephritis the remedies for these lesions are to be used; in the former digitalis and strophanthus, in the latter nitroglycerin.

If, inspite of the free and vigorous treatment, the volume of urine is not increased or the index of urea is stationary or not reduced and if menacing constitutional symptoms exist, the treatment changes to the specific plan, and the earlier the case is taken in hand after this conclusion is reached the better the showing will be.

Our remedies are chloral, which should be given in large doses, 30 to 60 grains at each dose by enema, and as much as 3 drams in twenty-four hours have been used. Winckel claims eighty-five cases out of ninety-two saved by chloral alone. Morphin, in which Veit shows a death-rate of 3.3 per cent., a record which has never been equaled by any other plan, has been given by him in doses of  $\frac{1}{2}$  grain at each convulsion, and he has given 3 grains in four to seven hours. In parenchymatous nephritis this plan is permissible, but in interstitial nephritis, which occurs about once in twelve cases, it would kill the patient. Venesection is preventative but not curative. In fifteen cases where nothing but bleeding was done, there was one death. It is admissible only in select cases. Veratrum viride has justified its claim as a remedy and when the pulse-rate can be kept at sixty, it is asserted, there will be no further convulsion. To reduce blood pressure Hirst recommends as of import-

ance in their order: puncture of the membranes, sweating, purgation, venesection, veratrum viride and nitroglycerin. Pilocarpin, which I have not used in ten years, I am glad to see is almost universally condemned to-day. Thyroid extract which Nicholson recommends as a vasomotor dilator is being tried. Ewing recommends parathyroid in one grain doses every three hours; if necessary it may be given by the stomach tube.

Although authorities differ as to the means to be utilized, there is great unanimity as to the value of rapid emptying of the uterus. The fact that convulsions usually cease when the fetus and placenta are delivered, or there is at least a mitigation of symptoms, and that the mortality is lowered in post-partum eclampsia, are arguments in favor of evacuation of the uterus as rapidly as may be consistent with the integrity of the lower segment. The choice of method in the obstetrical treatment of eclampsia depends largely on the training and experience of the attendant. If the physician has access to a hospital and with surgical experience to justify his undertaking any operative procedure, he may consider vaginal Cesarean section, as so clearly set forth by Dr. Reuben Peterson of Michigan University, who is now at work on an extensive report on the subject. Dr. Peterson claims the operation is simple and comparatively free from shock, that the technic may be mastered by the general practitioner and is done in the home of the patient, with the lowering of the mortality from the average plan of treatment. Both Hirst and Williams are inclined to put more strength on puncture of the membranes to lower the blood-pressure and stimulate dilatation of the lower segment, and they advise that when the os is dilated sufficiently by steel dilators to use the bags of Charpentier de Ribes, or Reynolds, with sterile salt solution, or the Harris method of manual dilation. Neither of these authorities recommend the Bossi giant dilator or the more rapid method of vaginal Cesarean section. In the absence of previous experience or surgical counsel, I should consider as a more conservative method the medical treatment and the waiting policy, or as one author expressed it, "taking an attitude of armed expectancy," ready to use forceps with proper engagement; or vaginal Cesarean section, given a primipara with an external os and a cervical canal tense and rigid, so that the inflated bag cannot be used, and where prompt delivery must be effected. I believe the operation is fully justified under the conditions noted. It must be borne in mind, as Williams insists, in view of the marked tendency of eclamptic patients to infection, that all operative procedures be carried on with the most rigid observance of asepsis, a most difficult thing in view of the condition of the patient and the environment which usually surrounds a case as formidable and erratic as eclampsia.



As much of the study of eclampsia is associated with its pathology, it may be worth while to summarize the subject as follows: Eclampsia is due to a poison which contaminates the maternal blood. In the latter half of pregnancy the ovum or fetus may be set down as the source of the toxins which produce the condition. In the early months of pregnancy the toxemia is probably due to excessive proliferation of the syncytial layers of the placenta. The thyroid furnishes, according to Nicholson, an antibody which keeps the equilibrium and safeguards the patient against toxemia by hypersecretion during pregnancy.

The toxins being carried to the liver of the mother are converted into substances which may be eliminated by the kidneys. If, for any cause, the liver fails to do its duty, the toxic material floods the maternal circulation; the kidneys are irritated, the central nervous system may break under the strain. The irritation of the kidneys is manifested through the capillaries and the epithelium, resulting in parenchymatous nephritis. Hirst makes the warning to discriminate between kidneys diseased but functionally sufficient and those healthy anatomically but functionally insufficient to do the work.

Eclampsia occurs once in 300 cases. Few pregnant women escape some toxicemic complication. Most frequently it occurs in primiparæ; ten times more frequently in multiple pregnancy. Eighty per cent. have albuminuria before eclampsia. The symptoms of all usually disappear with the death of the fetus; the emptying of the uterus generally marks the termination of the convulsions.

Increased blood-pressure is a constant symptom of toxemia in the latter half of pregnancy. It is the invariable forerunner of eclampsia. Every pregnant woman should have blood-pressure watched, also regular urinalysis throughout the second half of pregnancy should be made.

The mortality under conditions of to-day is still 25 per cent., and yet Germany, it is claimed, has a mortality of 10 per cent.

Prophylaxis is the important part of the treatment. This includes hygienic, therapeutic, medical and dietetic measures; clothing, exercise, bathing are the hygienic needs; diet includes milk, if well borne, otherwise milk-soup, squash, asparagus, beets, salad, spinach, meat once every other day; as therapeutic measures, in the pre-eclamptic state parathyroid extract, 1 grain every four hours, should be used; Basham's mixture or 3 grain doses of caffein and benzoate of soda may be given as diuretics. If, in face of this method, the blood-pressure continues to rise, albumin appears and headache, dimness of vision, epigastric pain and edema occur, the pregnancy must be terminated.

The obstetrical treatment must look to early evacuation of the uterus, as the ovum or fetus is the source of the toxins and statistics show lower

mortality after labor. Preliminary to delivery, it is best to avoid the use of chloroform during the convulsions; puncture of the membranes to hasten spontaneous dilatation and also to lower blood-pressure. Inject veratrum, 15 to 20 drops of the fluid extract, hypodermically and give an enema of warm milk with 40 to 60 grains of chloral. On the base of the tongue place two drops of croton oil. Better, if it can be done, wash out the stomach and inject through the tube 2 ounces of castor oil with 2 drops of croton oil. Sweating should be induced by hot packs or sweat cabinet for thirty minutes, using ice to the head while heat is applied to the body. A pint of normal salt should be injected subcutaneously, or several quarts may, in the emergency, be thrown into the bowel. This sweat and salt injection is to be alternated every hour, provided there is an equilibrium kept between solution injected and sweating. Nitroglycerin if convulsions recur. Hirst does not recommend morphin as a routine practice; he says it will kill a patient if with interstitial nephritis. (Meyer-Wirz says one in ten eclamptics have interstitial nephritis.) If patient can swallow she should be given concentrated salts, a dessertspoonful dose every fifteen minutes until catharsis follows. Cups, venesection or leeches may be used if congestion of chest, cyanosed face or stertorous breathing occurs.

If medical means fail, manual dilatation by Harris' method followed by forceps or version are to be considered in each individual case. Reuben Peterson says vaginal Cesarean section is the operation for the practitioner and commends it as a safe and simple method of doing prompt delivery.

It is to be kept in mind that shock may result from even attempts to expel the placenta by Credé method, in a woman reduced after delivery, where her pulse runs fast, skin is leaking, and temperature is subnormal. As in every emergency in obstetrics, much depends on the ability of the operator as to the outcome in eclampsia. Persistent efforts to do manual dilatation, occupying at least forty-five minutes must exhaust the patient, and although there still exists difference of opinion as to the relative safety of the waiting policy, or that of early interference, the trend of opinion to-day seems to favor as early emptying of the uterus as can be done with the full realization of the need of conservation. Each case must suggest its own solution as each problem furnishes its own conditions.

#### AN IMPROVED GRAVITY APPARATUS FOR THE INTRAVENOUS INJECTION OF SALVARSAN

JOSEPH L. BOEHM, M.D.  
ST. LOUIS

The ideal administration of salvarsan ("606") as suggested by Professor Ehrlich, is intravenously. If for any reason this drug cannot be

administered by vein it is problematic whether it should be given at all.

The physician so giving it should be qualified and possess a detailed knowledge of the technic and how to make a proper solution of salvarsan, all of which is explained in the circular accompanying each package of the drug; and many modifications of the technic of mixing it are found in the current medical literature. A solution, for intravenous use, must be made with hot sterile isotonic saline solution, using only distilled water and chemically pure sodium chlorid. A solution of from 150 to 200 c.c. should be made up. This must be filtered through sterile

of the fluid escaping from the needle. This is done to expel all air and bubbles from the rubber tubings (D and E).

The stop cock (F) is three-way and when turned directly in the middle between the two tubings all fluid will cease flowing.

Only exceptionally is it necessary to incise the skin in order to reach the vein, the median, basilic or cephalic; this may be exceptionally required in very adipose subjects.

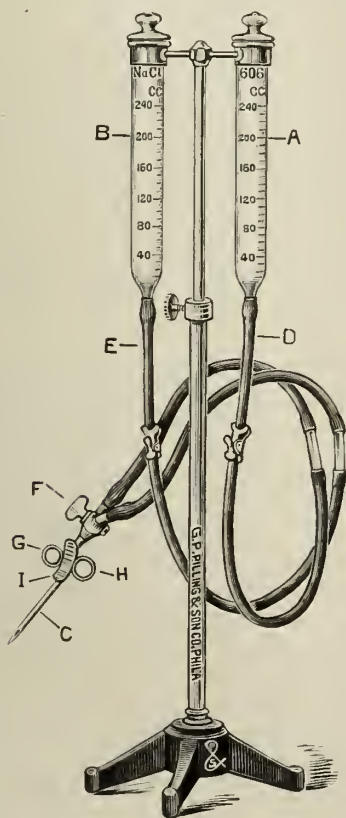
This apparatus seems, in my hands, to overcome and solve many of the difficulties and obstacles which many reports to date have shown to exist in such an intravenous injection. The paramount aim and desire in a well administered injection of salvarsan intravenously is to avoid absolutely any of the solution getting into the subcutaneous tissues before the needle enters the lumen of the vein.

The several syringes and air-pressure apparatus already on the market (whether either the solution is forced into the vein with an ordinary glass piston syringe or hand bulb, such as is used in an atomizer), have proven far from satisfactory and leave much to be hoped for in the desire for a perfect technic in the administration of salvarsan.

No solution should be given into a vein unless it is absolutely clear and sterile; the former is only to be attained by filtration. The writer has found in his experience with a large number of cases, where he used the intravenous method, that salvarsan at times is not of uniform quality, containing at times some foreign particles of flocculent matter, and if glass beads should be used in mixing it, which is now entirely unnecessary, small particles of glass may chip off the beads. Even if a mortar and pestle or a glass stirring rod are used in mixing the solution, such flocculency may also commonly be found. The accessory utensils used in making the solution as well as the gravity apparatus, filter paper, etc., must all be carefully sterilized.

The thumb-screw allows of lowering and elevating the glass containers to any desired level, so as to control the rapidity of the flow of the solution into the vein. No injection should be given intravenously in less than about ten minutes and the solution must be quite warm when poured into the containers so as to allow for cooling of same, while flowing out of the tubes, as the solution should be injected about the blood temperature.

The needle is held at about an angle of 10 to 15 degrees to the skin surface. The patient previously has a ligature of ordinary soft rubber catheter or tubing tied round the middle of the arm above the selected site of puncture, and is requested to tighten his fist in order to make the superficial veins more prominent, the forearm being also extended. As soon as the needle has entered the lumen of the vein, the rubber liga-



Dr. Joseph L. Boehm's Gravity Intravenous "606" Apparatus.

filter paper and be absolutely clear before placing in the reservoir, or glass container (A) of my intravenous apparatus. The container (B) should contain about 100 to 200 c.c. of the saline solution. This apparatus is portable and detachable and must in all its parts be thoroughly sterilized in boiling water before using. After filling both containers (A and B) with saline and salvarsan solutions, respectively, the saline solution is allowed to flow till it passes out of the needle (C).

The "606" solution in (A) is then allowed to flow down the rubber tube till some of the yellow fluid passes mixed with the saline solution out of the needle, which is shown by the yellowish color



ture is immediately released by an assistant, the stop-cock is reversed so that the "606" solution begins to flow from its respective tube through the needle into the vein. Of course the skin of the forearm and arm is previously prepared by cleaning with soap, alcohol and an iodine solution if desired. The thumb may rest on the metal plate (I) and the index and middle fingers pass through the metal rings (H and G) of the needle holder. This needle was designed by me with the thought that it will not produce cramping of the hand of the operator, as a firm and comfortable hold is afforded, especially when one wears rubber gloves, as I do in all my work in this line.

It is hoped that this will prove as satisfactory to others as it has to the writer.\*

**AN EXCEEDINGLY INTERESTING CASE OF RUPTURED ECTOPIC GESTATION, FOLLOWED BY ACUTE GASTRIC DILATATION AND PARALYTIC ILEUS—TRANSFUSION—GASTRIC LAVAGE—RECOVERY**

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ST. LOUIS

This case is interesting, not because it involved that portion of the tube (inner third) which according to Price belongs to the corner, but in view of the fact that, along with other cases of internal hemorrhage, it stamps indelibly on one's memory the danger of adynamic ileus. The question so often asked, when shall we operate? I believe must be answered only after considering each individual case; but that is not the purpose of this paper. I desire to call attention to those frequent complications which all of us have seen, following especially the various abdominal operations, namely acute gastric dilatation and adynamic ileus.

I have also observed that this condition frequently arises following large internal hemorrhages, such as occur after rupture of the spleen or kidney, or injury to their arteries; and I have asked myself the question, does the mechanical effect of hemorrhage, whether liquid or, more especially, clotted blood, produce adynamic ileus; or is this state brought about by an insufficient blood-supply with its fall in blood-pressure?

Let us for a moment consider the "abdominal brain," the solar plexus, which we know exerts a powerful influence on the peritoneal viscera under physiologic as well as pathologic conditions.

If we consider the solar plexus as a plant from which motor impulses are sent to, and returned from, the peritoneal viscera, is it not logical to conclude that any lesion which precipitates a break in the conductivity of its wires will impose

the condition known as adynamic or paralytic ileus, whether that ileus shall be caused by intra- or extraneous poisons (peritonitis), tear or rupture of a visceral wall, blood or shock resulting from a blow. We know that this center with its subplexes is a benefit, especially in perforations of the bowel where it quiets the neighboring loops of intestines by temporarily paralyzing them; and if the cause is not speedily removed adynamic ileus will rapidly develop.

Acute gastric dilatation in itself may be accounted for partially by the anatomic relations existing in regard to the vessels and duodenum.

Direct blood transfusions, fairly successfully performed, have thus far failed to cure or prevent the development of this most fatal condition—paralytic ileus.

Cases in which thorough toilet, as flushing with normal saline, of the peritoneal cavity has been carried out seem to develop the condition less frequently, probably due to removal of mechanical effect produced by blood.

I have seen the paralytic ileus occur following rupture of an ectopic pregnancy, rupture of the spleen, liver or kidney, in about half a dozen cases, the most interesting two of which I will report.

CASE 1.—B. K., No. 3652, entered the Hospital Aug. 7, 1910; social condition, married; age 29. She complained of pain, very general over the abdomen. The month previous, she stated, she had passed a large clot from the vagina after having missed her menses a month before, probably a cast of the uterus. Three hours previous to entrance into the hospital, or about noon of August 7, she suddenly became weak and called her physician, who had her forwarded to the hospital.

Her pulse at the time of admission was 88, respirations 26, and temperature 98°. An examination was made in the ward and the following notation was made: Uterus size of an orange, reaching two-thirds distance from symphysis to umbilicus. Cervix hard. Os slightly patent. Fundus points forward and to the right. Diagnosis at this time was made of three months pregnancy with threatened abortion.

My first visit to the patient was on the following morning in response to an urgent call to see her. The patient was found in a state of collapse, covered with cold, clammy sweat; radial pulse was absent. She complained of intense thirst and general abdominal pain. The patient presented the picture of terrific internal hemorrhage and looked like a marble statue. Diagnosis of ruptured ectopic pregnancy was made at once. Examination revealed a large, fluctuating mass posterior to the uterus in the cul-de-sac, which was very tender to pressure and slightly firmer than fluid. The patient was plainly in a condition which would not permit of operation, and it was decided to wait.

After waiting an hour, the patient's pulse was barely perceptible, and an operation was decided on.

Median incision four inches long was made, extending downwards from the umbilicus. Peritoneum opened and abdominal cavity entered. A large quantity of clotted, and some all liquid, blood at once escaped. The ruptured sac was found in the right tubal region just beyond the cornua of the uterus. It involved the inner third of the tube and the uterus, about a third of the fundus having been torn out. A three and a half months' fetus was found in the abdominal cavity, which had, no doubt, escaped from the sac. The uterine end

\* The outfit is manufactured by George P. Pilling & Son Co., Arch and Twenty-Third Streets, Philadelphia.

of the right tube and the side of the uterus having been extensively lacerated, it was necessary to do the usual salpingo-oophorectomy with a repair of the uterus. In bringing the uterus forward, a number of adhesions were found, and it was necessary to pack the eul-de-sac to prevent further hemorrhage. Two quarts of salt solution were poured directly into the abdominal cavity. Tube in pelvis. Closure in layers. While on the operating table, the patient was given 350 c.c. of salt solution and left the table in as good condition as at the time of operating, operation having taken 25 minutes.

Several hours later a blood transfusion was performed, but with only moderate success, only about two ounces of blood being carried into the circulation.

Under the treatment as recommended by Crile for shock, the patient's pulse improved and gradually slowed down. All drains were removed from the abdomen within 30 hours, the drainage having been extremely profuse at all times.

The pulse gradually improved, and on the third day the patient became greatly distended, vomiting enormous quantities of dark-green fluid at frequent intervals. Acute gastric dilatation was plainly evident, and gastric lavage was performed, eserin, stychnin and calomel ordered, and the Fowler position instituted. On the fifth day, the abdominal distention showed evidence of yielding to treatment, and on the morning of the fifth day the ileus showed signs of amelioration by recession of the distention and the passage of flatus and feces from the bowel. The patient's improvement was gradual, and in less than a month she left the hospital, having been held for the United States Immigration office.

CASE 2.—J. D., No. 8142, entered the hospital Jan. 10, 1911; white, male, aged 20, teamster by occupation. The patient entered the hospital giving a history of being knocked from his wagon by a street car. He was absolutely pulseless, no radial pulse being perceptible, was suffering from extreme shock, and it looked as if he would die before he could be put to bed. He showed no evidence of hemorrhage at this time, although he complained of some pain, especially well marked in the epigastric region and at times slightly to the left of the middle line. After being placed in bed under rigid treatment for shock, his pulse, which could not be counted for two hours, appeared at the wrist as a trickle beneath the finger.

Examination two hours after admission showed the liver dulness to be normal, although there was unmistakable flatness in the left flank. In view of the fact that the patient gave a history pointing to a fracture of the ribs, it was difficult to say whether this was a reflex or due to a visceral injury. The patient complained of slight thirst and at times his pain seemed to be paroxysmal.

Under general ether anesthesia, a six-inch incision through the inner border of the left rectus was made, the abdominal cavity entered. Entire abdomen found full of free blood. The intestine was discolored. Exploration of the dome of the liver revealed a slight laceration. The spleen was brought out and found to have a stellate fracture tearing through the hilum and opening the vessels. The injury was so severe as almost to divide the spleen into halves. The usual operation of splenectomy was performed. The wound was closed with through-and-through, silkworm gut sutures, after the patient had been turned on his side and a large amount of the blood evacuated before closing him. A metal tube was placed in the pelvis. The operation required 20 minutes.

On the 12, the patient showed considerable evidence of distention and his abdominal wound reopened in its entirety. Light, general ether anesthesia was administered, and the entire small intestine replaced in the abdomen. Closure was then made with interrupted silkworm gut sutures, through-and-through, with a firm binder.

At the time of the operation it was very evident that the patient had an acute gastric dilatation and a paralytic ileus. The patient did not do well and after waiting six hours it was decided to drain the bowel, and under local anesthesia this procedure was carried out.

On January 13 a blood transfusion was performed, as the patient's strength had held out and he was showing evidence of overcoming the paralytic ileus, about four to six ounces of blood being introduced. Gastric lavage, eserin and Fowler position were continued and the patient showed signs of improvement. Patient died suddenly on the thirteenth, when everything looked well for him.

#### COMMENT

I believe from these two interesting cases the mechanical effect of blood and its rôle in the production of acute gastric dilatation and paralytic ileus is well illustrated. The first case shows the mistake which is frequently made in diagnosing ectopic pregnancies, the case having previously ruptured, bleeding recurring the second time. The patient being a foreigner, no intelligent history could be obtained which probably accounted for the error in diagnosis at the time of entrance.

Case 2 shows how marked the shock may be and how impossible it would be for a patient to stand operation, even though he had a ruptured vessel which needed clamping. This would seem to set at rest the point which some operators make of immediate operation in all cases of ruptured ectopic pregnancy. In Case 2 the profound shock was, no doubt, caused by the direct contusion over the solar plexus, which with the mechanical effect of the blood produced the paralytic ileus.

Again, these two cases show how extremely difficult, and at times how impossible, it is to overcome the paralytic ileus following internal hemorrhage.

#### ECLAMPSIA \*

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Eclampsia is not properly classified as a disease but as the culmination of certain conditions with one constant exciting cause, pregnancy. It is accepted to be an acute toxemia of the pregnant or parturient woman, and in the vast majority of cases is characterized by recurring tonic and clonic convulsions followed by coma.

Eclampsia occurs once in every three to four hundred cases in private practice and most often during labor; next in frequency during pregnancy, and last during the puerperium.

Two conditions are recognized as the pre-eclamptic state and the phenomena occurring during and following the convulsions. Associated with the pre-eclamptic state, which occurs in about 25 per cent. of all cases, are such symptoms as tinnitus aurium, headache, edema,

\* Read at the meeting of the Benton County (Mo.) Medical Society, May 1, 1911.



amblyopia, dizziness, epigastric pains, and digestive disturbances. These conditions associated with insomnia, general depression and urinary insufficiency may be superseded by a marked activity of the skin, efficient diuresis and refreshing sleep. The convulsion of eclampsia is in many ways not unlike an epileptic paroxysm. The first evidence is the increasing rigidity of the muscles, twitching of the eyelids, the staring eye, contracted pupils irresponsive to light, which become widely dilated: as the paroxysms reach the climax jerking is present in the muscles about the nose and mouth. The arteries in the neck pulsate visibly and the skin of the face becomes livid, the thumbs are clinched in the hands, the knees are flexed and the abdominal muscles are rigid; the breathing becomes shallow and spasmodic; the tongue protrudes between the teeth and the frothy saliva is tinged with blood. The tonic convulsions are followed by clonic spasms which begin in the face, after which there is profound coma. The duration of the interval between attacks is from a few minutes to several hours, depending on the malignancy of the case.

The pulse is usually of high tension, rapid and small, while the temperature may be or may not be normal at the beginning. Death may occur from cerebral hemorrhage, pulmonary edema, or exhaustion. It is significant that rapidly fatal cases of toxemia may show neither casts nor albumin in the urine. However, there is an involvement of the kidney in about 80 to 85 per cent. of all cases of eclampsia. The urine usually contains albumin which increases with each convulsion. Eclampsia may resemble acute poisoning, epilepsy, hysteria, cerebral hemorrhage and acute uremia. But the history of the case and the existence of pregnancy will suffice to establish a diagnosis.

*Prophylaxis and Medicinal Treatment.*—In presenting this paper I am not trying to advance any new treatment, but I wish to call your attention to what I think is the safest and sanest treatment for this condition.

In the first place we must consider eclampsia as a toxemia of pregnancy and must direct our attention to this fact. We too often overlook the severe headache and attribute it to the bowels; the epigastric pain and spots before the eyes to digestive disturbances, and the restlessness to nervous conditions of the patient. But all these symptoms we are often told of after it is too late, after the patient has had the first convulsion.

What are we to do with each case of threatened eclampsia? Can we wait, or must we hasten labor? I believe we should take a complete history of every case of pregnancy that comes under our care. If a primipara, the history of any disease that may have left a nephritis or heart lesion. If a multipara, not only this history but a complete history of the conditions that existed dur-

ing the last pregnancy. If eclampsia existed in a former pregnancy we must be more careful lest we face a similar condition. I believe an examination of the urine is next in importance to the clinical history. In the majority of cases where symptoms of eclampsia exist we will be able to find albumin in the urine. And we also have a high blood-pressure. Last but not least is the treatment.

*Treatment.*—Take the case that comes under our observation early. If we find present albumin, small amount of urea with lessened secretions of urine, fast pulse, high blood-pressure, we must try to bring about elimination which must be through the skin, bowels and kidneys. I think magnesium salts one of the best remedies we have, given in saturated solution in large enough doses until free elimination of the bowels is brought about.

An appropriate diet is also necessary. Milk seems to be the safest and best during the time there is any evidence of disturbance. Nitrogenous food should be prohibited. Light wool should be worn next to the skin. Daily baths, plenty of fresh air, and surroundings as happy as possible.

Under this treatment patients may go on to term, but should they grow worse we must try to produce elimination by the skin and bowels. This may be accomplished by wet and dry heat. Wet by wringing blankets out of hot water and putting over the patient. In some cases I like the dry heat the better, which may be obtained by heating bricks, which are afterward wrapped in cloth and alcohol poured over the bricks. This will soon produce diaphoresis. Then give glonoin freely to lower arterial tension, dilating the blood-vessels and promoting diuresis. Use 2 or 3 gtt. of croton oil if necessary to empty the bowels at once.

But now should we find our patients in convulsions, veratrum is the drug which I think stands first, dose varying from 5 to 30 m. hypodermically; repeat this every thirty minutes until the pulse comes down to sixty or eighty. The next thing to do is to bleed the patient if the pulse is high and bounding. In these cases the indication of labor is usually indicated, but we must take care of our patient until this can be done. Chloral hydrate from 10 to 40 grains per rectum is indicated. High salines of magnesium sulphate may be used. Morphin hypodermically has been used extensively but is now condemned by our best writers, as is chloroform; but I prefer using them when necessary.

In giving a summary I would say as follows: Prophylactic treatment resolves itself into, first, preventive measures; second, curative measures.

*Preventive Measures.*—1. Frequent examination of urine.

2. Estimation of urea and amount of urine in twenty-four hours.

3. Blood-pressure.
4. Clinical history.

*Curative Measures.*—Elimination by the skin, bowels and kidneys.

Magnesium salts, calomel, croton oil, glonoin, morphin, veratrum, chloral hydrate, as the indications call for.

*Diet.*—Plenty of water, milk sweet or sour and a limited amount of nitrogenous foods.

*Habits.*—Slight exercise, daily baths, happy surroundings and woolen clothes.

## THE THYROID AND PARATHYROID GLANDS \*

CHARLES GEIGER, M.D.  
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To Prof. Kocher, of Berne, Switzerland, perhaps more than any other, is due the credit of placing surgical attacks on the thyroid glands on a firm basis. I believe he should rightly be called "The Father of Modern Goiter Surgery."

The thyroid gland presents one of the most interesting of problems to the physiologist, the anatomist, the internist and the surgeon. During the past few years the enormous contributions from the physiologists have greatly enriched our knowledge of the ductless gland, and especially is this true of the thyroid.

A new field for study was offered in the experimental problems that suggested themselves in connection with thyroid function, which was opened by the discovery of Kocher and of Reverdin, that extirpation of the thyroid was followed by severe cachexia. At first these experiments were complicated by a lack of knowledge of the parathyroid glands but that subject has now been made clear by a more exact study of the latter organs which will be discussed later. Then came the observation of the efficacy of mouth-administered thyroid extracts as a substitute for the gland itself, and then the discovery that the thyroid possessed a marked power of regeneration when transplanted, sufficiently indeed to act permanently for a removed or diseased organ.

Our knowledge of hyperthyroidism has been increased by the ability to study glands removed at various stages of Graves' disease, but the complicated phenomena, that occur in connection with the reaction of thyroid diseases on the organism as a whole, still offer a rich field for investigation that may well lead us into a consideration not only of cretinism and exophthalmic goiter but also of such conditions as certain neuroses, psychoses, dermatoses, rickets, osetomalacia, obesity, and allied conditions.

Accessory thyroid nodules are frequently found, sometimes lateral to the thyroid but more commonly in the neighborhood of the thyroid

bone, or they may be below the gland, as far down as the aortic arch, behind the sternum. Rarely are they found within the larynx or trachea. The accessory thyroids are of the same histologic structure as the thyroid gland itself; goiter and tumors may develop from them just as from the main gland.

Graves' disease (thyroid hypertrophy), Basedow's disease (exophthalmic goiter), with parenchymatous goiter, papillary cystic goiter and sometimes fetal adenoma of the thyroid; and according to the classification of McCarty, we have in addition to the struma the appearance of certain phenomena, such as exophthalmos, heart palpitation, tremor of the hands, the nervous symptoms, especially of vasomotor type, in varying degrees of prominence. Autopsies of such individuals show atrophy, parenchymatous myocarditis, and frequently a persistent thymus and splenic enlargement.

It is in the hyperactive thyroid that we seek an explanation of these symptoms, and the recent work of Dr. Louis B. Wilson has shown that there is a definite parallel between the increased amount of functioning tissue and absorbable secretion in the thyroid gland and the degree of severity of the symptom.

One fact of extreme importance should be noted. Some of the German clinicians have insisted that the so-called simple or benign goiter is a comparatively harmless condition, except for the mechanical disturbances which it causes. I am sure that this is an entirely wrong conception of this matter. In such a benign goiter the ordinary symptoms of Graves' disease may arise suddenly, very frequently from severe overwork of either a physical or mental character or from some severe emotional disturbance.

The extent of the pathologic process in the thyroid is not always to be brought in line with the severity of the symptoms, however, as the patient's ability to neutralize the increased secretion has to be taken into consideration.

This has taught us to observe closely, even in the early stages, that the slightest mental excitement or exertion of any kind is harmful. Kocher said, "Any psychic excitement is extremely harmful." In many instances every symptom is increased with enormous rapidity, so that the patient loses ground to a marked extent from day to day and a week or month may change the case from a hopeful to a hopeless condition. I have repeatedly observed such decline. It seems in these cases, when the excitement is kept up, as though the blood was rapidly filled with a most active poison. Physical exhaustion brings the same result only in a less violent form. In a number of cases in which the condition was mistaken for neurasthenia and consequently treated by vigorous exercise and mental diversion and social excitement, I have seen the patients become

\* Read at the Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



rapidly worse only to improve on the substitution of absolute rest.

The mental condition of these patients often causes them to become intensely interested in social or religious affairs or possibly in music or literature. I have encountered an instance in which a patient of mine, a woman, became almost insanely interested in a literary way. The particular subject on which these patients waste their energy is probably largely accidental and due to environment, but it is equally harmful and must be stopped without making too serious an impression on the patient's emotions. That it is of the very greatest importance to secure rest for these patients there can be no doubt. In postoperative cases, it is much easier to carry out than in cases that have not been operated. Rest must be insisted on for many months after the patient has entirely recovered without regard to mode of treatment that has been employed in any given case. Such patients should be guarded as much as possible against severe sudden or continued strains that can be avoided, but that must be accepted in the life of other persons. This would apply especially to pregnancy, which has otherwise resulted in a large per cent. of abortions and in the death of a considerable number of mothers, although, according to Charcot, the surviving mothers are likely to recover from their exophthalmic goiter.

A number of other conditions other than mental excitement serve regularly to increase the gravity of exophthalmic goiter sometimes to alarming or even a fatal extent; and it is consequently important that these should be pointed out with special emphasis. This is especially true because some of these conditions are employed in the treatment of simple goiter. Ochsner, in his late work, states that more than half of all cases of goiter would recover under careful dietetic, hygienic and medical treatment.

Personal experience has taught me that surgical treatment should be adopted early if the desired results are obtained generally speaking; that is to say, before the heart has suffered irremedial degenerative changes. This surgical procedure consists in ligation of some of the vessels, thyroidectomy or sympathectomy; the first often is a preliminary measure to thyroidectomy. The ligation method is especially applicable to cases of mild hyperthyroidism and those advanced cases in which the late degenerative changes have been so marked as to contra-indicate any radical operative procedure.

Some patients are in such an extreme condition that preliminary treatment by heart tonics, diuretics and absolute rest are necessary before even the resort to ligation is advisable.

Under this treatment we have a percentage of absolute cures. Most all cases are distinctly benefited and the mortality is low.

Delore, of Lyons, France, says that exophthalmic goiter results from two causes: a thyroid lesion and a nervous lesion. Surgeons attack sometimes one, sometimes the other.

Thyroidectomy should be only partial so as to avoid cachexia strumipriva; we should preserve a portion sufficient to supply the demands to carry on metabolism, etc. Subscapular hemithyroidectomy is the operation that should be generally done. After the operation there is seen an early and immediate phase of improvement of the objective troubles and tachycardia. The latter is one of the most remarkable effects of the operation. Later we see also a slow and progressive improvement of the subjective symptoms and a definite cure. An ideal recovery demands a relatively long period; it occurs in not less than six months to two years. The operations which are directed toward a nervous lesion in goiter are summed up in sympathectomy. This operation consists in the resection of the cervical sympathetic, and is defended by Jaboulayee of Lyons and Jonnesco of Bucharest. As a result of this operation they claim an immediate relief of the exophthalmos; the goiter diminishes, but much more slowly; the subjective condition also improves. Still the effects of sympathectomy are inconstant. Larnment believes that the action of surgery cannot be supplemented in the treatment of goiter either by radiotherapy or by medical treatment. He says thyroidectomy is the only one which has given proofs of a complete and prolonged cure. Larnment thinks that when the physicians send to the surgeons only cachectic and almost desperate cases, as too often happens, surgeons can make only murderous and useless operations. Exophthalmic goiter must be operated on early and with good general conditions present.

Doyen, of Paris, thinks that the only operation to be practiced for exophthalmic goiter is thyroidectomy which, if it is done rapidly with proper technic, is harmless and exposes the patient to no serious accidents. Jonnesco, of Bucharest, thinks on the contrary as above stated that the treatment of the cervical sympathetic is the best treatment in exophthalmic goiter. Kocher, of Berne, in his new work on surgery, says the operation of thyroidectomy demands much minute work and prudence, but that with precaution one may get a mortality of 2 per cent. or less.

A few words with reference to the technic of partial thyroidectomy. We make a collar incision through the skin and divide the platysma on a different level to that of the derma. When the gland is reached the capsule is divided parallel to the trachea and stripped back by the use of dry gauze, or Kocher's thyroid dissector. The descending thyroid vessel is grasped by two hemostats and, dividing the tissue between forceps,

one may lift the upper pole sufficiently to permit of suturing the isthmus; dividing of the isthmus permits free exposure of the ascending thyroid, which may be ligated while in full view of the operator. The extirpation is done wholly within the capsule, insuring safety to recurrent laryngeal and parathyroids. One must sometimes divide transversely one or more of the anterior cervical muscles, in order to freely expose the field. The sternothyroid and sternohyoid are the muscles which cause greatest interference, and if they cannot be sufficiently pulled aside they should be divided between two hemostats. The division should be high, at the junction of the middle of the upper third. All muscles should be carefully sutured before completing the operation. After controlling all hemorrhage by ligation, using linen for ligatures, a small drainage tube surrounded by gauze is introduced through an independent stab wound and the incision is closed by a continuous catgut suture.

#### PARATHYROID

Hidden away behind the more prominent but not unimportant thyroid gland are the parathyroid glands which for a long time escaped the eye of the anatomist, and even for a long time after they were finally discovered they were given no particular notice. But finally a French investigator noted that a rabbit deprived of these bodies died in tetany. Gradually the importance of this observation through extensive confirmation of animal investigation dawned on the surgeon and the practitioner of medicine.

The histologists have proven these bodies to possess a structural difference from that of any other tissue. These glands appeal most strongly to the surgeon on account of the question of post-operative tetany in connection with thyroid surgery. Such tetany was not unknown to the earlier surgeons. The technic of modern thyroid operations has practically obviated such untoward results.

Perhaps the greatest interest to-day centers around parathyroid therapy. The matter of making good the loss of parathyroid tissue or controlling tetany after parathyroidectomy, by feeding of parathyroids or the use of gland extracts or the transplantation of the parathyroid gland in different parts of the body, preferably underneath the rectus abdominus muscle, or by the use of calcium salts recommended by McCallum and others.

As to the part played by the parathyroids in the body we can only say that their complete removal as has been practiced so many times in a wide variety of animals leads to death with severe symptoms of tetany, which is in no way associated with or dependent on the thyroid gland, as we once thought. We also know that by their gradual complete destruction severe

neural disturbances may be brought about ending in death with no symptoms of tetany.

While the exact mechanism by means of which the symptoms of tetany are brought about following the loss of the parathyroid glands is still open to investigation, it may be stated that there are two main hypotheses: first, the idea that a metabolic toxin (which under normal conditions is neutralized by the parathyroid secretions) gives rise to the symptoms; the second, that the symptoms are due to a diminution of calcium in the tissues (which has been shown to follow parathyroid removal), the withdrawal of which leaves the nerve cells in a state of hyperexcitability which expresses itself in tetany. While there is some question as to the fact that such condition as exists in the second hypothesis is present following the removal of the parathyroid glands, nevertheless the administration of a soluble calcium salt will promptly check the symptoms of tetany. It is a mooted question at present as to whether this calcium deficiency is always present after parathyroidectomy.

The calcium salts, I believe, act as an antitoxin on the poison that accumulates after the removal of the parathyroid gland. That a poison is circulated in the blood following the parathyroid removal is shown by the fact that the symptoms can be controlled for a time by bleeding and then transfusing from an animal with normal blood. Moreover, as Fiffer and Mayer have demonstrated, while the serum of a parathyroidectomized animal will not produce symptoms of tetany in a normal animal, it does bring on these symptoms in an animal that has suffered partial removal of the parathyroid gland.

The rarity of hypoparathyroidism to-day following thyroid operations is due to the technical method with which it is accomplished. Especially to be commended is the subcapsular proceeding of Dr. C. H. Mayo, which is emphasized in his late clinical report, suggested primarily to avoid injury to the laryngeal nerve, an ultra ligation of the thyroid arteries, as recommended by Halsted. So it has come about as we have noted in detail, that tetany following thyroid removal has been reduced to less than one-half of 1 per cent. of all cases.

Even when tetany does follow goiter operations, a remedy is now assured for its control by the administration of parathyroid gland extracts, calcium salts, and most important of all, transplantation of the parathyroid glands.

As to the anesthetic to be used, ether by inhalation is preferable in the majority of cases. In some cases it is advisable to use local anesthesia. Beta-eucain is used by some, but I prefer quinin urea, which absolutely has no toxic effect. I am now experimenting with colon anesthesia, and if it proves what it promises will be the ideal anesthetic in all goiter operations.



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## Missouri State Medical Association

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### EDITORIALS

#### MERIT SYSTEM FOR HOSPITAL EMPLOYEES

At the 1911 meeting of the Missouri State Medical Association, the Committee on Public Health and Legislation presented as one of its recommendations the following:

It is the sense of this Association that a merit system should be established in the selection of the officers and employees for the state hospitals of Missouri.

The Committee on Public Health and Legislation will assume the burden of the preparation and promulgation of a proper bill to attain this end to be presented to the next legislature for its consideration.

The report of the committee was unanimously adopted, committing the State Assembly definitely to the support of a merit system.

It is worth while to call attention to the desire of the Association in the management of the state hospitals. It is, in short, the removal of all hospital employees of Missouri from the exigencies of politics, to make appointments dependent on special fitness and merit, not upon opinions wholly irrelevant and unrelated to the care of sick people, as the tariff, free silver, corporation control, etc.; to appoint by reason of experience and skill in a special line of work and not because the appointee has delivered a certain number of votes at the last preceding election; to attain a method of examination and investigation which will not only select for the service of the state good employees, but which will constantly, by further examination and careful records, secure the pick of such employees rendered more valuable by training in the work.

In adopting a merit system, we do not have to defend the whole history of civil service. Most civil service laws have been compromises, the grudging gift of the politicians who have only relinquished inch by inch the spoils system. None is ideal, none so perfect as to be above criticism. But however imperfect, the civil service rules are superior to the spoils system and with constant revision will meet in a pragmatic

way the needs of the nation, the state and the municipality.

Insane asylums, especially, need trained supervision and alert, intelligent control, and help in every department must be trained in humanity and self-control, for insane people are often exceedingly trying, even insulting and abusive or dangerous.

That retention and promotion in the service must be made to depend on the record of each employee, goes without saying, and compensation in the different grades should be an adequate incentive to good work. We may not hope to attract or keep good employees unless they are properly compensated; but a part of the attraction of the service should be tenure during good behavior and promotion for merit from one institution to another, or in some cases in the same institution.

Superintendents should have had at least three years' experience above the grade of intern, and first assistants at least two years' residence and experience in a large hospital for the insane.

Attendants of record should be in immediate charge of halls, and new recruits should be closely supervised and carefully trained.

Trained nurses from general hospitals should be a part of every force, for insane people are often sick of general diseases and need special care.

M. A. BLISS, St. Louis, Mo.

### EDITORIAL NOTES

THE Missouri Association for the Relief and Control of Tuberculosis is planning to inaugurate an active campaign in the fall.

At a recent meeting of the Executive Committee resolutions were adopted inviting cooperative action of the Missouri State Medical Association, the State Board of Health and the State Sanatorium for Tuberculosis. Governor Hadley is honorary president of the Association and Dr. H. E. Pearse, of Kansas City, is president.

GREAT preparations are being made for the sixth annual meeting of the Medical Association of the Southwest, which will meet in Oklahoma City, Okla., October 10, 11 and 12, 1911. The association will have present as its invited guests Dr. A. R. Edwards of Chicago, who will deliver the oration on "Internal Medicine," and an officer from the Public Health and Marine-Hospital Service, who will be specially detailed to attend this meeting to present a paper on some topic of public interest. The secretary has made

application for reduced rates on all railroads, and the profession of Oklahoma City are planning great things for the members attending. These things, with an unusually strong program, should attract a larger attendance than any former meeting.

**THE MISSOURI ASSOCIATION FOR THE RELIEF AND CONTROL OF TUBERCULOSIS.**—More than 5,500 persons died of tuberculosis in Missouri in 1910, according to reports read yesterday, at a meeting at 625 Locust Street of the Executive Committee of the Missouri Association for the Relief and Control of Tuberculosis. Plans were formulated for carrying on the work in 1911. The abolition of the public drinking-cup, enactment of a state-wide law, prohibiting spitting on sidewalks, and segregation of indigent consumptives in state institutions, constitute lines of work to be executed by the society. Committees were appointed as follows: Ways and Means—J. Hal. Lynch, St. Louis, chairman; Wm. K. Bixby, St. Louis; Mrs. Kate E. Pierson, Kansas City. Public Meetings and Lectures—Dr. Solon Cameron, St. Louis, chairman; Dr. James Stewart, St. Louis; Dr. Wm. Porter, St. Louis; Dr. H. E. Pearce, Kansas City; Dr. A. J. Campbell, Sedalia. Publicity—Dr. R. M. Funkhouser, St. Louis, chairman; Dr. Woods Fassett, St. Joseph; Dr. T. A. Coffeldt, Springfield; Dr. E. W. Schaufler, Kansas City. Miss Winifred Doyle of St. Louis, Secretary of the Association, was elected delegate to the National Congress of Tuberculosis Workers at Denver, Colo., June 20-21. Miss Doyle will read a paper on "The Missouri Special Tuberculosis Exhibit Car." At a recent meeting of the Board of Directors of the Association at Jefferson City, the following Executive Committeemen were named: A. A. Speer, Chamois, chairman; Robert S. Brookings, Edward Mallinckrodt, William K. Bixby, Dr. R. M. Funkhouser, Dr. Wm. Porter, Mrs. F. H. Kreismann, Dr. George Homan, Dr. James Stewart, Dr. Solon Cameron, Mrs. Ernst Jonas, St. Louis; Mrs. Kate E. Pierson, Dr. E. W. Schaufler, Kansas City; Dr. W. S. Allee, Olean. The Association expects to reduce the death-rate from tuberculosis in the state by lectures delivered by the medical profession of Missouri and publicity of the press on consumption. Although Missouri experienced 5,500 deaths from tuberculosis last year, the Association officers say the rate is no higher than other states, considering the population. The Association has received the support of Gov. Hadley, Honorary President of the Association; also the Missouri State Medical Society, the State Board of Health and the Board of Managers of the Missouri Sanatorium at Mount Vernon, Mo.

## MISCELLANY

### THE LEAGUE FOR MEDICAL FREEDOM

Our members should be familiar with the character of persons who are responsible for this league, so we publish the following taken from the *Journal of the A. M. A.*:

"*Collier's Weekly*, June 3, prints the following editorial under the caption: 'Liberty':

"Protests from readers have greeted our criticism of the League for Medical Freedom. Also a protest is telegraphed from the California branch of the league. In the minds of most of those who protest, the principal objections are to the following positions taken by us: 1. That the league contains the kind of men who opposed the pure food act. 2. That the activities of the league are against public welfare and frequently surreptitious. Our answer follows:

"1. B. O. FLOWER, one of the nine founders of the league, and now in his second term as president of it, was PRESIDENT of "THE R. C. FLOWER MEDICINE COMPANY" from 1885 to 1899. R. C. FLOWER is the notorious quack and general humbug whose latest arrest was as late as 1908. B. O. FLOWER wrote the league's pamphlets on "Bubonic Plague" and "The Compulsory Medical Inspection of School Children." His views on patent medicine are often expressed. For instance:

"I believe that a great majority of the proprietary medicines are infinitely less dangerous to the public than the majority of regular doctors' prescriptions.

"2. C. W. MILLER, second vice-president of the league, was also one of the founders. In his newspaper, which publishes patent medicine advertising, he has constantly fought the medical profession. Last year one of his addresses against what he calls a "doctors' trust" was delivered to the Dairy Association in Baltimore. We may say in passing that *Collier's* does not believe in freedom to sell tuberculous milk any more than it does in freedom to sell tuberculous meat.

"3. MRS. DIANA BELAIS, a director and also a founder, has appeared before in this paper as president of an anti-experiment society, a well-meaning, ignorant, reckless, and muddle-headed agitator. We are officially informed by the chairman of the "committee on publicity and education" of the league that Mrs. BELAIS was made a director "because of her courageous efforts to secure a higher law in New York State than the doctors' cruel theories and professional arrogance." Here's to anti-experiment, meningitis, diphtheria, and freedom!

"4. DR. C. S. CARR, who is on the advisory board, edits a pseudomedical sheet. *Collier's* long ago printed a letter signed "The Peruna Drug Company, per CARR." As editor of "Medical Talk for the Home," he carried advertisements of many of the medicines exposed in *Collier's* in our series on "The Great American Fraud." He is now editor of the *Columbus Medical Journal*, which he at once turned from an ethical sheet into a sheer fraud. Look at the issue of May, 1909. On the front cover is a picture of CARR himself writing: "All drugs are poison. All druggists are poisoners." On the reverse side is an advertisement beginning: "Prescribe Antikamnia and Codein tablets in la grippe, headaches, etc." Hurrah for freedom and Peruna!

"5. GEORGE P. ENGLEHARD, who is on the advisory board, has for a long time in his journals [*Medical Standard* and *Western Druggist*] defended the patent-medicine interests.

"6. CHARLES HUH, also a member of the board, is a prominent officer in a cooperative patent-medicine concern.

"7. Another founder was a member of the advertising agency which is now spending for the league the money which it puts into its advertising campaigns.



"The league says it did not oppose any "sanitary or quarantine laws." This statement requires some hardihood, as the hearings of the Senate Committee on Health, and more especially of the House Committee on Foreign and Interstate Commerce, show. It would interest us to know whether the league can point out a single health bill introduced in Congress which it has not opposed. When the leaders wish to oppose a sanitary or quarantine law they do it on the ground that such a law would *indirectly* "lead to compulsory and discriminatory legislation."

"The league was nominally born recently, but those who make it up had already as individuals, and even as organizations (such as the Colorado League for Medical Liberty) opposed State and National legislation. A pamphlet published by the Colorado branch singles out *Collier's* for attack, and was written by a notorious quack doctor. In California, which was the special theme of our former editorial, if the league should prevail, the next threat of bubonic plague would be carried out, instead of being suppressed like the last; small-pox might again become a serious epidemic; school children would bear their ills as best they might. A bill was introduced ordering that the Board of Health be composed of two "allopaths" (a school which does not exist but is a hostile term for regular physicians), two homeopaths, two "eclectics," two osteopaths. It did not pass!

"Some leading homeopaths and osteopaths, be it said, are in favor of a national health bureau and strongly against the agitation of the league. DR. FRANCIS B. KELLOGG, president of the California State Homeopathic Society, in an address recently said: "... In my opinion there is an effort being made to exploit the homeopathic profession by influences and interests which are indirectly but radically opposed to the welfare not only of practitioners of medicine in general, but to that of humanity itself. I refer to the effort to enlist homeopathic support for the so-called National League for Medical Freedom."

"PLATO complained that in his day doctors made too sharp a distinction between the body and the mind. In our day the best class of physicians frequently recommend faith cure and Christian Science, and the Emmanuel movement is an indication that it is possible for science and religion to work together in healing. Few more observers rate the benefits that Christian Science has brought to the community more highly than we do. A belief which so frequently brings about an actual improvement in character, disposition, bodily health, and mental atmosphere, deserves the most serious recognition, even by those who regret its hostility to the progressive science of medicine. It is possible at times, for clever designers to use members of any faith for disastrous purposes. When R. C. FLOWER was at the height of his career, in 1907, as manufacturer of diamonds, vender of fake mining stock, wearer of most ingenious disguises, traveler under assumed names, and general artist in gold bricks, he conceived the idea of playing for profit upon the earnest beliefs of the followers of Mrs. EDDY. One of his accomplices, a woman, who also used an assumed name, worked the game with him, and when Dr. FLOWER, alias Mr. CORTLAND, took up the cudgels in defense of Christian Science, without being requested to do so, he said:

"Not that I am one of its disciples, but I like to see every one FREE TO PRACTICE MEDICINE AS HE WISHES".

"Here we have the very words themselves from old Doc FLOWER. Up with freedom!

"Everybody who believes in "freedom" in medicine is within his natural and political rights in supporting this league. *Collier's*, not believing in this species of "freedom," is also within its rights in treating the league as a menace, the make-up, bias, and purpose of which ought to be fully understood."

## SOCIETY PROCEEDINGS

### CONSTITUTION

#### ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Missouri State Medical Association.

#### ARTICLE II.—PURPOSES OF THE ASSOCIATION.

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Missouri, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

#### ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

#### ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be the members of the component county medical societies.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

#### ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, and (2), *ex-officio*, the officers of the Association as defined in this Constitution.

#### ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

#### ARTICLE VII.—SESSIONS AND MEETINGS.

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, delegates and guests.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

#### ARTICLE VIII.—OFFICERS.

SECTION 1. The officers of this Association shall be a President, five Vice-Presidents, a Secretary, a Treas-

urer, a Chairman and Vice-Chairman of each Section, a Secretary of each Section who shall be an Assistant Secretary of the Association, and twenty-nine Councilors more or less, as shall be determined by the House of Delegates from time to time.

SEC. 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its annual meeting and each shall hold his office for one year. The Councilors shall be elected for terms of five years each, being so divided that one-fourth of the number shall be elected each year. Section officers shall be elected by the members registered in the Section and shall serve for a term of one year each. All these officers shall serve until their successors are elected and installed.

SEC. 3. The Vice-Presidents, Councilors and Members of the Committee on Public Policy and Legislation shall be elected by the House of Delegates on the morning of the last day of the annual session, but no Delegate shall be eligible to any office named in the preceding section except that of Councilor, Chairman, Vice-Chairman or Secretary of a Section; and no person shall be elected to any office who is not in attendance at that Annual Session and who has not been a member of the Association for the past two years.

SEC. 4. The President and the Orators shall be elected by the General Assembly on the morning of the last day of the meeting.

#### ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publication, and for such other purposes as will promote the welfare of the Association and profession.

#### ARTICLE X.—REFERENDUM.

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members present, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

#### ARTICLE XI.—THE SEAL.

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

#### ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

#### BY-LAWS.

##### CHAPTER I.—MEMBERSHIP.

SECTION 1. All members of Component Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a component society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

SEC. 3. No person who is under sentence of suspension or expulsion from any competent society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

#### CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

SECTION 1. The Association shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session or as fixed by this Constitution and By-Laws.

SEC. 2. Special sessions of either the Association or of the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

#### CHAPTER III.—GENERAL MEETINGS.

SECTION 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions, and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper read before the Association, except those of the President and Orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

#### CHAPTER IV.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent



with their duties. But if the business interests of the Association and profession require, it may meet in advance, or remain in session after the final adjournment of the General Meeting.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 50 members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. A majority of the registered delegates present shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

SEC. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping-stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

SEC. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

SEC. 11. It may divide the counties of the State into Councilor Districts.

SEC. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

SEC. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

SEC. 14. It shall present a summary of its proceedings to the last general meeting of each Annual Session, and shall publish the same in the transactions.

#### CHAPTER V.—ELECTION OF OFFICERS.

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The President on the first day of the Annual Session shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the name of one member for each of the offices to be filled by the House of Delegates at that annual session.

SEC. 3. The report of the Nominating Committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 4. Nothing in this chapter shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 5. Each Section shall elect its own officers, consisting of a Chairman, a Vice-Chairman and a Secretary.

SEC. 6. Nominations for President and Orators shall be made in the General Assembly on the morning of the last day of the Annual Session.

#### CHAPTER VI.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the treasury only on a written order of the Chairman of the Judicial Council countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessments against each component county society at the end of the fiscal year, which shall be December 31st; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary shall attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association,

except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

SEC. 5. The Secretaries of the Sections shall act as Assistant Secretaries of the Association.

#### CHAPTER VII.—COUNCIL.

SECTION 1. The Council shall hold daily meetings during the Annual Session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Association for reorganization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and Secretary, and the latter shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association and shall act for the Association during the interval between meetings.

SEC. 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor, or component society. Its decision in all such cases shall be final.

SEC. 4. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint an editor and such assistants

as it deems necessary. Further, to facilitate this work, it shall be the duty of the Secretaries of the Sections, during each Annual Session, or as soon thereafter as practicable, to deliver to the editor, or his duly appointed agent, all such proceedings, reports, addresses, papers and other documents, as may have been ordered for publication. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the Chairman of the Council and countersigned by the Secretary of the Association. All matters of the Association pertaining to the expenditure of money for other purposes shall be referred, during the Annual Session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the Council to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Association, or the Treasurer, the Chairman of the Council shall fill the vacancy ad interim until the next meeting of the Council.

SEC. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the Chairman and Secretary of the Council, as such.

#### CHAPTER VIII.—COMMITTEES AND SECTIONS.

SECTION 1. The standing committees shall be as follows:

- A Committee on Scientific Work.
- A Committee on Public Policy and Legislation.
- A Council on Medical Education.
- A Committee on Defense.
- A Committee on Cancer.
- A Committee on Nominations.
- A Committee on Arrangement, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of the Chairman and Secretaries of the various Sections. It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly as practicable.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. The members of this committee shall serve for a period of three years; except that upon the adoption of this amendment one member shall be elected to serve for one year, one for two years and one for three years, and thereafter one member shall be elected each year. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall



keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, State and national affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such time as may be arranged during the Annual Session.

SEC. 4. The Council on Medical Education shall consist of three members, appointed by the President. One member shall be appointed to serve for three years, one for two years and one for one year; thereafter each year one member shall be appointed to serve for three years. The Council on Medical Education shall make (1) an annual report to the House of Delegates on the existing conditions of medical education in the state and in the United States; (2) make suggestions as to the means and methods by which the State Medical Association may best influence favorably medical education; and (3) act as the agent of the Missouri State Medical Association, under the instructions of the House of Delegates, in its efforts to elevate the standard of medical education.

SEC. 5. The Defense Committee shall consist of three members who shall, upon request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against any member of the Association.

#### CONDITIONS.

(a) Any member desiring to avail himself of the provisions of this section shall, as soon as possible after any demand has been made upon him, present to the committee his request for aid in the defense, together with a full and complete history of the case and the services therein rendered. The committee shall then with the aid of its counsel advise said member up to the time of the institution of suit without any expense to the member so charged. Should the member desire the committee's services subsequent to the institution of suit he shall authorize the committee to aid further in the defense of said suit. The committee shall thereupon without expense to the member provide for all medical expert services necessary for the trial, and the necessary legal services of its counsel: *provided*, that the committee shall not obligate itself or the Association for the payment of any damages awarded in the trial or upon compromise.

(b) Such medico-legal aid or defense as is herein specified refers only to civil malpractice and is not to be construed to apply to criminal prosecutions.

(c) The committee shall have authority to employ counsel to represent any member of the Association in suits for alleged malpractice upon the terms hereinabove provided. The compensation of the attorney shall be determined by the committee.

SEC. 6. The Committee on Cancer shall consist of three members who shall make an annual report of the prevalence of cancer in this state, its nature and the progress in its treatment.

SEC. 7. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sections 2 and 3 of these By-Laws.

SEC. 8. The Committee of Arrangements shall consist of the component society in the territory in which the Annual Session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the

program, and shall make additional announcements during the session as occasion may require.

SEC. 9. Duties of Officers of Sections. The Chairman shall preside at the meetings of the Section and shall perform such duties as usually belong to such an office, or as may be provided by the rules and regulations of the Section. The Vice-Chairman shall assist the Chairman in the performance of his duties and shall preside in his absence or at his request. The Secretary shall keep a record of the proceedings of the Section in a book provided for that purpose, and shall perform such other duties pertaining to his office as may be imposed by the rules and regulations of the Section and the By-Laws of the Association.

#### CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

SECTION 1. An assessment of two dollars (\$2.00) per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on or before December 31st in advance of each Annual Session.

SEC. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or the House of Delegates until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

#### CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

#### CHAPTER XI.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

#### CHAPTER XII.—COUNTY SOCIETIES.

SECTION 1. All county societies now in affiliation with this Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the Council, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates and shall be signed by the President and Secretary of this Association. The Council or House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to

unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

SEC. 12. At some meeting in advance of the Annual Session of this Association each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty (50) members, or major fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the Annual Sessions.

SEC. 13. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on or before December 31st, in advance of each Annual Session, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

#### CHAPTER XIII.—ENTERTAINMENTS.

No official entertainment shall be accepted by this Association during its Annual Sessions.

#### CHAPTER XIV.—AMENDMENTS.

These By-Laws may be amended at any Annual Session by a majority vote of all the delegates present at that Session, after the amendment has laid upon the table for one day.

Emergency clause provides for immediately going into effect after adoption.

#### REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

The Committee on Public Policy and Legislation has been chiefly concerned this year with preventing the passage of undesirable medical legislation at our Capital. The effort of the Committee has been to keep in touch with all matters affecting the well-being of the medical profession. It has been the policy of the Committee not to mix up in politics and it should be distinctly understood that the medical profession stands aloof and has an eye single to the benefit of humanity, of which, however, it seems difficult to convince the average individual.

By invitation of the State Board of Health your Committee attended the meeting at Jefferson City in December, 1910, to consider health matters and the needs of the State Board of Health. A committee was appointed, which met in St. Louis in January to discuss the plans and frame a bill which would increase the powers of the State Board of Health, and thereby make it more effective and useful. This measure was strongly advocated by the Committee. The present laws governing the local county health officers are not effective for the reason that these officers cannot be penalized for neglect of duty or refusal to obey the orders of the State Board of Health, therefore, a bill was introduced relating to the control of certain epidemic diseases, specifically named, which would remedy this defect and place the local health officers under the direct supervision of the State Board of Health.

The first bill was submitted for approval to the office of the Attorney-General of the State, and was then introduced to the House and Senate. It was subsequently withdrawn on account of the great opposition that developed against it, and a substitute bill, which was also submitted to the Assistant Attorney-General, was introduced. The Committee desires at this time to acknowledge the assistance and the friendliness of the Attorney-General's office toward the Association.

It is rather humiliating to report to this body that even this mild measure was defeated in the House of Representatives; it could probably have been passed in the Senate, but the sentiment in the House was so antagonistic that it was deemed inadvisable to push the matter further at this session. The discussion on the floor indicated a general antipathy by the average legislator to any and all measures of a medical nature.

Another measure which was supported by the State Association provided for the inspection of the sight and hearing of school children throughout the State by school teachers, school superintendents and medical inspectors. This bill was not pushed by the Committee, neither was it antagonized. Medical inspection of school children is in its infancy in Missouri and is successfully performed only in St. Louis, Kansas City and Springfield; even in these cities it is still in its experimental stage.

Let us turn now to the measures that the Committee has opposed, and with some degree of elation, to offset the depressing effect of the information contained in the first part of this communication, the Committee desires to say that optometry was not recognized by our Legislature. The usual tactics of the optometrists were followed in their effort to pass a bill legalizing their practice in Missouri, but the State Association



had sufficient influence with the Committee to which this was referred to obtain an adverse report from the Committee, and it did not pass.

Efforts are being brought to bear upon those in authority at Columbia University, New York, for the discontinuance of the course of optometry, with apparent success. This course should never have been established as it gave a handle to the trade for the use of the word, optometry, and therefore misleading.

Another bill that was opposed by our Committee is a bill to create a separate board of examiners for eclectics. It was reported unfavorably by the House Committee, and did not pass. A second bill was introduced by the eclectics and met the same fate.

Several bills were presented by doctors not members of the organized medical profession, affecting the practice of medicine, one of which, though apparently praiseworthy, contained a "nigger in the woodpile," in that license to practice medicine must be issued without examination to any person who was a student previous to 1902, upon presentation of a diploma from any reputable medical college. Another bill compelled every physician to call another physician to witness any operation for abortion, and was so worded that the physicians under those circumstances would not be amenable to the law.

The Committee desires to call attention to the fact that our forces are too often divided and scattered. In order to accomplish the best results in legislative matters nothing should be attempted without full and free conference with this Committee; no bill should be presented unless the subject matter has been thoroughly weighed, for a defeat means loss of prestige and a weakening of the doctor's influence; and no bill should be introduced as emanating from the organized medical profession unless it has been submitted to, and received the endorsement of, this committee. Some bills were introduced in the last session by a practitioner, who is not a member of this Association, who permitted the member of the House of Representatives introducing the bills to labor under the impression that the bills were endorsed by members of our Association. We would urge that no member lend his endorsement to any measure until he has ascertained whether the measure has the endorsement of the Association and of this Committee.

The osteopaths are at strife among themselves and the kettle is calling the pot black. A great scandal is "aborning," and from the evidence in the hands of the Committee, we believe there is no doubt but that an investigation will follow in the interest of truth and decency and the protection of the public.

A bill was introduced to place a prohibitory license upon itinerary peddlers in the hope that it would prevent the peddling of patent medicines. It did not pass.

An expert testimony bill was prepared after joint conference with a Committee from the State Bar Association, and introduced by that Association. If it had passed it would have relieved medical expert testimony of much of the odium that now attaches to it. The principal change is to empower the court to call medical experts and fix their fees, thus giving the physician an opportunity to testify as to the actual conditions without being accused of bias. But strange to say it failed to pass. It was opposed chiefly by lawyers of the Senate.

A curious, but instructive incident occurred apropos of the bill to increase the powers of the State Board of Health. After that measure had been defeated a certain legislator was informed that his child was sick with scarlatina and his home quarantined, but the information was added that the disease was not scarlatina and should not be quarantined. This gentleman approached the officers of the State Board of Health and begged that the quarantine be lifted. He was informed that the State Board of Health had absolutely no authority to interfere with any act of the local physician, but was also told that the very power

he wanted exercised was denied the State Board of Health by the Legislature, of which he was a member.

On March 7, during the session of the Legislature, a public health meeting was held at the request of the Governor at Jefferson City in the House of Representatives. This Committee was invited and did attend, and also the President and Secretary of the Association, the members of the State Board of Health, and the members of the Commission on Tuberculosis. About 150 persons were present at the meeting, and considerable interest was aroused in hygienic and sanitary subjects. Our president, Dr. Pearse, demonstrated with lantern slides the ravages of disease in crowded communities, and the beneficial results of pure air and attention to the simple rules of sanitation in the school and home.

The defeat of the bill to legalize optometry and other vicious medical legislation, and the passage of the bill providing for counties and groups of counties to establish district tuberculosis hospitals, are the principal results of the legislative work of your Committee. The Governor of Alabama vetoed the optometry bill passed by the legislature of that state.

Missouri is the first State to take such an advanced step in the campaign against tuberculosis, and the medical profession should interest itself in promoting the establishment of these district hospitals. The Committee on Public Policy and Legislation was not informed of the introduction of this bill, nor was its assistance requested in securing the passage of the act, but we feel that it should, notwithstanding, be recorded as an accomplishment made possible through the efforts of members of this Association.

In due time the Board of Curators of the State University were notified of the resolution adopted by the Association at the Hannibal meeting in 1910, and by invitation of the Board of Curators the Committee on Public Policy and Legislation, and other representatives of the State Medical Association, attended the December meeting of the Board to discuss plans for the reestablishment of the clinical course in medicine. The results of the meeting were not encouraging. No plan was forthcoming. The Committee on Public Policy and Legislation had no plan and possessed no authority to offer one. The report which the Board of Curators subsequently published indicates that the reestablishment of the clinical course, if accomplished at all, will be at Columbia. Much can be said pro and con relative to this conclusion.

Dr. Lutz, Dr. Goodwin and the chairman of the Committee on Public Policy and Legislation held a conference with Hon. Champ Clark, when the latter was in St. Louis shortly after the Christmas holidays, and discussed the merits of the Owen Bill and other medical questions.

The chairman of the Committee on Public Policy and Legislation attended the joint meeting of the Committee on Medical Education and the Committee on Public Policy and Legislation of the American Medical Association, and made his report as State Delegate to the National Legislative Council. Although the questions discussed were the same as at former meetings, there appeared to be a firm solidarity among the members who appreciated what was needed and were attempting to take the surest and sanest steps for accomplishment.

This Committee recommended to the National Committee the appointment of a committee of three or five to meet a similar joint committee of the National Bar Association to frame an expert testimony bill for the general adoption in the States, the recommendations of the joint committee to be transmitted to the board of trustees of the A. M. A. for action.

I desire to say here that the Committee could not have accomplished what it has been able to do without the cooperation of the auxiliary members of the Committee in the counties, and of the secretaries of the County Societies. These gentlemen have responded

with commendable promptness and zeal to all appeals for assistance. Our ill success, however, in regard to the State Board of Health emphasizes the fact that we have not yet learned how to make the fullest use of the strength of our Association. But we hope that the lessons learned in this campaign will teach us how to overcome the influence of persons who are opposed to measures which will protect the health of the people of Missouri.

During the political campaign last fall letters were sent to the candidates for Congress asking them to support the Owen Bill, and in every instance a pledge to do so was received. This information was published in our State Association Journal and transmitted to the Secretary of National Public Health Committee body and to Dr. W. C. Woodward, Washington, D. C.

The validity of the medical practice act has recently been upheld by the Supreme Court and practically a definition of what constitutes the practice of medicine declared by that body to be, "that holding oneself out and representing and professing to be able to heal disease, no matter by what process is practicing medicine within the meaning of the law." This decision should make the way clear for the prosecution of persons who do not possess the requisite qualifications for entering the medical field by obtaining a license from the state board of health.

This committee believes the Association should put itself on record and by proper resolution show its sympathy with and indorsement of the action of the boards of education of St. Louis and Hannibal to enforce the rule of compulsory vaccination of all children in attendance upon the public schools; and should offer any assistance in case of any suit that has been filed or may be filed, or otherwise. Action of a similar character has been taken by the St. Louis Medical Society where a committee of three was appointed to act with the board of education in a suit which has been filed.

The resolution introduced by Dr. Fulton and adopted at the last annual meeting, relative to pre-examination of "every man entering or seeking to enter marriage," and referred to the Committee on Public Policy and Legislation, was given due consideration. The Committee, however, did not consider it opportune to present this matter to the Legislature when it was apparent that the General Assembly took no pains to hide its antipathy and opposition to any measure emanating from the medical profession.

This Association should make energetic efforts towards securing safer methods of celebrating the 4th of July. A committee should be appointed for the purpose of giving wide publicity throughout the state to the statistics of deaths and injuries as authentically published and should conduct a campaign through local clubs, societies and associations in all the cities and towns in Missouri, and cooperate where these exist with the same to secure the enforcement of existing laws or ordinances restricting or prohibiting the use of fireworks or firearms during the celebration of said day. There is a tendency in certain parts of the country to change the customs of celebration by having various kinds of activities, such as fairs, entertainments, etc.

A resolution was adopted at the last annual session, requesting the county medical societies to hold annually one or more public meetings for the instruction of the public in preventing the "black plague" (venereal diseases). Your Committee believes it would materially assist in the dissemination of this information if the State Medical Association would lend its influence to the work being conducted along the lines by the St. Louis Society of Social Hygiene. The Committee is also of the opinion that there should be a very intimate connection of the organized medical profession with any organization that has for its object the betterment of mankind, and we particularly recommend the coordination of the influences of this organi-

zation with the work of the Missouri Association for the Relief and Control of Tuberculosis.

In view of the fact that the attention of the public has recently been drawn to the lamentable conditions existing in some of the public institutions of this state, it is the sense of this Association that a merit system should be established in the selection of officers and employees in state hospitals and that a proper bill to accomplish the same should be prepared and presented to the next legislature.

The Committee desires to express its grateful acknowledgment to the members of the Senate and House who manifested a spirit of friendliness toward the medical profession and the measures advocated by us.

In the Senate: Senators W. S. Allee, Dr. T. J. Feaster, Thomas E. Kinney, Thomas F. Lane, Frank W. McAllister, A. E. Methudy, A. L. Oliver, J. W. Peck, Dr. Lee Welch. In the House: J. J. Alford, Speaker; John T. Barker, James W. Bowers, J. B. Boyd, R. F. Britton, Dr. A. C. Crank, Dr. T. H. Duckett, T. F. Hagenow, Dr. N. R. Holcomb, James H. Hull, Dr. W. W. Hull, Hiram Lloyd, B. L. Matthews, Dr. A. W. Mitchell, E. C. Orr, S. M. Pickler, O. T. Remers, John D. Taylor.

The Association owes its thanks to Dr. A. C. Crank, a member of the Legislature from Johnson county, for a set of the revised statutes of Missouri, and other documents useful in the work of this Committee which have been placed among the Association's archives in the Secretary's office.

There were several members of the House who were very active and determined in their efforts to defeat any measure that had the support of the organized medical profession, and labored diligently to repeal the vital statistics law. These men should not be returned to the Legislature if our profession can prevent it. The bill to legalize optometry was introduced by a member from Jackson County.

The following are the titles of bills introduced in the 46th General Assembly, 1911, affecting the practice of medicine:

#### HOUSE BILLS.

##### HOUSE BILL No. 52.

##### AN ACT

Creating a state board of eclectic examiners.

Did not pass.

##### HOUSE BILL No. 93.

##### AN ACT

Creating a board of examiners in optometry, and defining and regulating the practice thereof.

Did not pass.

##### HOUSE BILL No. 165.

##### AN ACT

To amend an act entitled: "An act to regulate the system, method or science of healing known as osteopathy, and as taught and practiced by the American School of Osteopathy at Kirksville, and for the regulation of the same.

Did not pass.

##### HOUSE BILL No. 259.

##### AN ACT

To provide for the physical inspection of children in the public schools of Missouri and appropriating money therefor.

Did not pass.

##### HOUSE BILL No. 367.

##### AN ACT

To provide for the appointment of a qualified chemist and the establishment of a chemical laboratory by the State food and drug commissioner.

Passed.



## HOUSE BILL No. 415.

## AN ACT

To repeal section 6668, of article 2, chapter 53, of the Revised Statutes of Missouri, for the year 1909, entitled "Registration of births and deaths-burial permit."

Would permit burial of bodies without knowledge of board of health.

Did not pass.

## HOUSE BILL No. 557.

## AN ACT

To repeal section 6653 of article 1, chapter 53, Revised Statutes of Missouri, 1909, relating to the state and county boards of health, and enact in lieu thereof two new sections, to be known as sections 6653 and 6653a, and more fully providing penalties for the violation of the rules and regulations of said state boards of health.

Did not pass.

## HOUSE BILL No. 572.

## AN ACT

To repeal article 3, chapter 787, of the Revised Statutes of Missouri, 1909, entitled, "Disposition of Dead Human Bodies."

Did not pass.

## HOUSE BILL No. 876.

## AN ACT

To repeal sections 6664, 6665, 6667, 6668, 6669, 6670, 6671, 6672, 6673, 6674, 6675, 6676, 6677, 6678, 6679, 6680, 6681, 6682, 6683, 6684, and 6685, article 2, chapter 57 of the Revised Statutes of Missouri, of 1909, entitled, "Registration of births and deaths."

Repealing vital statistics law.

Did not pass.

## HOUSE BILL No. 936.

## AN ACT

To repeal sections 6664, 6665, 6667, 6668, 6669, 6670, 6671, 6672, 6673, 6674, 6675, 6676, 6677, 6678, 6679, 6680, 6681, 6682, 6683, 6684, 6685, and 6686 of chapter 53, article 2, of the Revised Statutes of Missouri, 1909, entitled: "Registration of births and deaths."

Repealing vital statistics law.

Did not pass.

## HOUSE BILL No. 1110.

## AN ACT

Creating the state board of eclectic medical examiners.

Did not pass.

## HOUSE BILL No. 1120.

## AN ACT

To regulate the practice of medicine and surgery.

Did not pass.

## HOUSE BILL No. 1213.

## AN ACT

To repeal sections 4458 and 4459, article 4, chapter 36 of the Revised Statutes of Missouri, 1909, entitled: "Crimes and punishments," and to enact a new section in lieu thereof, to be known as section 4458.

Requiring physician to call another physician before producing abortion.

Did not pass.

## HOUSE BILL No. 1214.

## AN ACT

To prohibit certain classes of medical advertisement and to provide punishment for the violation thereof.

Prohibiting advertisement of cures for lost manhood, venereal disease, etc., in newspapers or otherwise.

Did not pass.

## SENATE BILLS.

## SENATE BILL No. 63.

## AN ACT

To provide for the physical inspection of children in the public schools of Missouri and appropriate money therefor.

Did not pass.

## SENATE BILL No. 80.

## AN ACT

To amend chapter 46, article 3, Revised Statutes of Missouri, 1909, entitled, "Witnesses," by adding thereto six new sections 6384, 6385, 6386, 6387, and 6389, regulating the employment, pay, and duties of expert witnesses in civil and criminal causes.

Did not pass.

## SENATE BILL No. 93.

## AN ACT

To amend section 6668 of the Revised Statutes of Missouri, 1909, relating to burial permits, by inserting certain words.

Permitting physicians to issue burial permits except for coroner's cases.

Did not pass.

## SENATE BILL No. 109.

## AN ACT

Creating a state board of eclectic examiners.

Did not pass.

## SENATE BILL No. 472.

## AN ACT

To provide for the creation of public tuberculosis districts.

Passed.

JABEZ N. JACKSON,

A. R. McCOMAS,

ROBT. M. FUNKHOUSER, Chairman,

*The Committee.*

## REPORT OF THE COMMITTEE ON NECROLOGY

We your Committee on Necrology, after diligent search and inquiry, beg leave to report the following deaths:

Edward C. Adams, M.D.—Northwestern Medical College, St. Joseph, Mo., 1886; a specialist on diseases of the eye and ear of St. Joseph, Mo.; died in a hospital in that city, May 14, from cerebral hemorrhage, aged 52.

John Marshall Allen, M.D.—St. Louis Medical College, 1854; a member and in 1899 third vice-president of the American Medical Association; died at his home in Liberty, Mo., November 1, from pneumonia, aged 77. Dr. Allen represented Clay county in the legislature in 1884 and 1885; served throughout the Civil War in the State Guard of Missouri and the Confederate service as brigade surgeon and finally as chief surgeon of the district of Mississippi and Louisiana. He was one of the organizers and professor of diseases of the abdomen in the University Medical College of Kansas City, and later president of the college.

Dr. Allen had been a practitioner in Clay county for sixty years and was known to almost every resident in the county.

All his life Dr. Allen had lived in Clay county. He was born there July 20, 1833. His parents, Shubaell W. and Dinah Trigg Allen, were among the earliest settlers of the county. He was one of the members of the first graduating class of William Jewell College in 1850, and later finished his course at the Pope Medical School of St. Louis in 1854.

At the outbreak of the war, Dr. Allen enlisted with the Confederates as surgeon, rising to brigade surgeon, taking the rank of captain, and afterwards rising to

the position of chief surgeon west of the Mississippi and Missouri rivers.

From 1877 to 1882 he was a lecturer at the University of Missouri. He resigned to organize the University Medical College and was a professor at the time of his death. He was a member of the legislature in 1884-5.

Dr. Allen was a medical student all his life and up to the time of his death had been experimenting with a cure for tuberculosis.

Two children survive, Shuabell Allen of Liberty and Mrs. John Stoufer of Mount Sterling, Ky. A brother, D. C. Allen, is an attorney at Liberty.

J. A. Atkisson, M.D.—University of Nashville, 1880.

Dr. J. A. Atkisson, of Morehouse, Mo., one of the most prominent and successful physicians in this part of the state, broke down mentally and physically, from overwork, and ended his life on night of Sept. 2, 1910, by choking himself to death with his necktie tied to the post of his bed. He had been insane for several months, and at lucid intervals warned his family to watch him to prevent suicide. His sad death is deplored by a wide circle of friends in New Madrid county. (From New Madrid, Mo., *Weekly Record*, Sept. 10, 1910.)

William H. Barrett, M.D.—St. Louis Medical College, 1863. Born in Virginia, June 1, 1837. He was appointed surgeon in the U. S. A. in 1864, and promoted to brigade surgeon in 1865. He was a charter member in the Cass County Medical Society, and a member of the Missouri State and American Medical Associations. He died at his home in Harrisonville, Mo., April 17, 1911.

Thomas Beattie, M.D.—University of Edinburgh, Scotland, 1849; M.R.C.S., Edinburgh, 1849; surgeon of the ship *Restitution* on its cruise round Greenland in 1849; for more than fifty years a practitioner of Cass County, Mo.; died at his home in Harrisonville, Mo., February 3, from cerebral hemorrhage, aged 83.

August Berg, M.D.—University of Berlin, Germany. For many years a practitioner of St. Louis, died at the home of his daughter in Belleville, Ill., Sept. 18, 1910, from gunshot wound self inflicted.

Joseph Nathaniel Birch, M.D.—Howard University Medical Department, Washington, D. C., 1899; died at his home in Kansas City, Mo., Oct. 27, 1910, of typhoid fever, aged 35.

William Litchworth Birney, M.D.—Missouri Medical College, St. Louis, 1879; a member of the Missouri State Medical Association; for half a century a practitioner of medicine, and for forty years a resident of Hydesburg, near Hannibal, died at his home January 29, from pneumonia, aged 79.

James Oscar Breech, M.D.—Barnes Medical College, St. Louis, 1906; assistant to the chair of gynecology in his alma mater; died at his home in St. Louis, December 30, from nephritis, aged 50.

Lewis S. Brown, M.D.—Graduate from the College of Physicians and Surgeons, Keokuk, Iowa, in 1876. He was a member of the Missouri State Medical Association and former member of the American Medical Association, and for several years president of the Knox County, Mo., Medical Society; died at his home in Edina, Mo., April 21, 1911, of arteriosclerosis, aged 75 years.

Lucius S. Campbell, M.D.—American Health College, Cincinnati, 1882; for many years practitioner of Marshfield, Mo.; died at the home of his son at Springfield, Mo., April 11, from senile debility, aged 83.

E. S. Cave, M.D.—Edwin S. Cave, M.D., was born in Boone county, Mo., July 7, 1856, and died at his home in Mexico, Mo., Sunday July 10, 1910, aged 54 years and 3 days.

He attended the public schools at Martinsburg, Mo., from there to the high school in Mexico, then to the State University at Columbia where he took the degree of B.S. four years later. In 1884 he took the degree of M.D. in Missouri Medical College, St. Louis, and at

once located in Mexico where he practiced his profession with marked ability until he was disabled by that arch destroyer of mankind, Bright's disease. He is survived by his wife, four children, two sisters and three brothers.

The following clipping from the Mexico *Ledger*, is a worthy tribute to a worthy man: "Dr. E. S. Cave was a pillar of strength for good in this community, respected and beloved, not only as a distinguished physician, but as a man who steadfastly stood for the uplift of those about him. A physician of ability, a business man of integrity, living a pure, private life, he loved those things ennobling and of good repute. Dr. Cave will be missed from the bedside, from business, lodge and school circles; from clean politics where he was a patriot, always standing for good government; by his friends to whom, rich and poor, high and low, he was always true; by the church where he was earnest, active and liberal; from his home which he loved most of all; a loyal devoted husband, a kind indulgent father; his home life was ideal. In the prime of life, when he was most useful and most needed by his family and the community generally he is taken from us. The death of no man in this community would cause more universal sorrow. 'God works in a mysterious way his wonders to perform.'

"For years Dr. Cave was corresponding secretary to the State Medical Association. He served the Democratic party in Audrain County for a number of terms as chairman of the county committee and was local Wabash railroad surgeon. He was also a member of the Mexico School Board."

Jason Chaney, M.D.—Dr. Jason Chaney, born in Scott county, Mo., May 7, 1852, died at his home at Senath, Mo., Friday, Dec. 2, 1910, at 11 o'clock. The body was interred at Senath on Saturday, the funeral services being conducted by Elder N. H. Summitt, of Cardwell, of the Christian church.

He came to Dunklin county when 23 years old and had lived here since, a respected citizen, a scholarly physician and surgeon, and a man of bright mind.

His first wife was Miss Fannie Lee Ward, by whom he had two children. She died, as did the two children. In June, 1885, he was married to Miss Emily Lee Parker, who died a few years later. Of the four children of this union, two survive, Mrs. Inez Browning and Lew Chaney.

His last wife, who survives him, was Miss Nancy Palmer, daughter of Lee Palmer, to whom he was married in December, 1901.

He left a brother, Charles Chaney, 71 years old, who lives in Scott county, and one sister, Mrs. Kindall of Sikeston. The parents were raised in Kentucky.

Dr. Chaney was considered one of the best read men in the county, and his death is regretted by a large number of people. (Clipping from Kennett, Mo., *Democrat*, Dec. 9, 1910.)

Albert Berry Clanton, M.D.—Jefferson Medical College, 1852; of Hattiesburg, Miss., a lieutenant in the Mexican war, and a surgeon in the Confederate service during the Civil War; died at the home of his daughter in St. Louis, February 17, from pneumonia, aged 81.

Franklin Cooley, M.D.—University of Louisville, Ky., 1848; surgeon of the Tenth Missouri Volunteer Infantry and Seventh Missouri Volunteer Cavalry during the Civil War; for sixteen years a member of the local pension examining board of Lexington, Mo.; founder of the first medical college in Kansas City, and professor of surgery for three years; died at the home of his daughter in Kansas City, Feb. 16, 1911, aged 90.

Louis B. Craig, M.D.—Louis B. Craig, M.D., graduated at Missouri Medical College, St. Louis, in 1879; formerly member of American Medical Association; died at his home, Salem, Mo., April 9, 1911, of pneumonia, aged 58 years.

H. K. Castle, M.D.—Dr. Homer K. Castle, 61 years old, died at his home, 2122 East Twelfth street, Kansas City. He had lived in Kansas City twelve years.



He leaves a widow and four sons. (From *Kansas City Post*, Sept. 5, 1910.)

R. H. Dyke, M.D.—Missouri Medical College, St. Louis, 1878; died at his home in Belleflower, Mo., April 19, aged 57.

John Edmond Faber, M.D.—Washington University, St. Louis, 1899; a member of the Missouri Medical Association; secretary of the Lawrence-Stone County Medical Society; local surgeon at Aurora for the Missouri Pacific railway; consulting physician to the Missouri State Sanatorium for Incipient Tuberculosis, died in the Deaconess Hospital, St. Louis, January 6, a week after an operation for appendicitis, aged 34.

John Bartley Fleming, M.D.—“In the news that comes from St. Louis conveying the news to us that we have lost the inspiration, love and sympathy that we have been so fortunate in sharing the past few years through the life and influence of our departed friend and comrade, Dr. J. B. Fleming, perhaps we do not as yet see clearly, and cannot understand why the young and many times the most promising among us, are cut down by the sickle of death. Why death thus chooses a shining mark, and takes from us one whose friendship afforded us so much pleasure, enjoyed in our daily association, and the loss of one whose death causes so much sadness, but it is well at this time for us to remember that there is a Higher Power who doeth all things well, and ‘perhaps some day we’ll understand.’ If we could only understand that the real and true man is not dead, but is yet alive, and it is for us to imitate his many good qualities; that even greater things than we have seen may be done.

“Dr. Fleming in his daily life was an inspiration to all. His patient untiring devotion to his chosen profession, which called forth his best efforts for the alleviation of human suffering, was a duty never shirked by him.

“His devotion to his little family was indeed commendable, and our heart goes out in deepest sympathy to the bereaved relatives, and especially to his young wife, whose cup of sorrow seems to have been more than filled in the loss of those near and dear to her. May little Virginia, whose young life is overshadowed by the loss of her devoted father, prove a comfort and blessing to her mother through life and in this, her hour of bereavement.”—The *Aurora Argus*.

Henry R. Field, M.D.—License, Mo., 1884; for 43 years a practitioner of medicine of Rockville, Mo.; postmaster in 1892; died at his home, May 19, from gastric ulcer, aged 72.

Theodore F. Fienup, M.D.—St. Louis University School of Medicine, 1904; a member of the American Medical Association; died at his home in St. Louis, December 31, from pneumonia, aged 39.

“Nathan A. Foster, M.D.—Dr. Nathan A. Foster, the best known and oldest physician of Ralls county, passed away at his home here at 6:30 o’clock last night. He was 84 years old and had been very feeble for the past two months. He had given up active practice about five years ago after working in this county for over half a century. During his fifty years as family physician for scores of people in this vicinity he had come to be one of the best known and highly respected citizens. He was held in great esteem by the other members of his profession and was called in frequent consultation by them.

“Last fall the Ralls County Medical Society at its meeting here tendered a banquet to Dr. Foster, who was its oldest member, at which he was given quite an ovation.

“Dr. Foster was a member of the Christian church and as a Christian man took advantage of the many opportunities for doing good which come to the medical practitioner. He was an honored member of the Masonic order also. He is survived by a widow and one son, George Foster, who is a merchant in Center, being a member of the firm of Foster & Dunlap. No other relatives of the immediate family survive him.

Mrs. Foster is very old having reached the age of 78 years.

“The funeral services will be held Sunday morning at 10 o’clock at the Christian church, under the auspices of the Masonic order. The place of burial has not been definitely decided as yet.” Center, Mo., March 11. (Clipping from the Hannibal, Mo., *Post*, March 11, 1911.)

Robert M. Gallen, M.D.—Illinois Medical College, Chicago, 1904; died at his home in St. Louis, Mo., August 15, from diabetes, aged 34.

William G. Gray, M.D.—Washington University, St. Louis, 1862; for many years a practitioner in Greene County, Mo.; died at the home of his daughter in St. Louis, December 22, from disease of the intestines, aged 73.

Robert Quincy Gray, M.D.—Washington University, St. Louis, 1907; a member of the Missouri State Medical Association; formerly a practitioner of Cabanne, Mo.; later surgeon of the Guggenheim lead mines in Mexico; died in a hotel in San Antonio, Texas, November 24, from the effects of a gunshot wound believed to have been self inflicted with suicidal intent, aged 27.

Samuel H. Griffin, M.D.—Missouri Medical College, St. Louis, 1880; a member of the American Medical Association; died at Humansville, Mo., April 7, from pneumonia, aged 61.

George William Harrison, M.D.—Miami Medical College, Cincinnati, 1873; formerly of Newton, Mo.; died at Chester, Mo., August 2, from heart disease, aged 58.

Samuel A. Huffman, M.D.—St. Louis College of Physicians and Surgeons, 1896; formerly president of the Macoupin County, (Ill.) Medical Society; died at his home in St. Louis, November 24, from heart disease.

Charles M. Johnson, M.D.—University of Pennsylvania, 1850; a practitioner of St. Charles county, Mo., for more than fifty years and the oldest physician of the county; died at his home in St. Charles, June 7, aged 84 years.

Evan Jones, M.D.—College of Physicians and Surgeons, Keokuk, Iowa, 1876; died at his home in New Cambria, Mo., January 30, from pneumonia, aged 65.

Robert S. Kelso, M.D.—Graduate of Rush Medical College, 1864, a veteran of the Civil War; member of American Medical Association and Missouri State Medical Association, died at his home in Joplin, Mo., from influenza, March 12, 1911, aged 76.

Dr. Robert S. Kelso, 76 years of age, a resident of Joplin since 1883, died from grip at 4 o’clock Sunday morning at his home, 409 West Third street, and the funeral is to be held at 2:30 o’clock tomorrow afternoon at the chapel of the Cunningham Undertaking company at Fourth and Wall streets, under the auspices of the Knights Templar. Rev. Charles A. Weed is to conduct the service. Burial is to be at Fairview cemetery.

Few people have undergone the thrilling adventures that befell the lot of Joplin’s pioneer citizen. Forced into the Federal army during the Civil War, when his sympathies were really with the South, Dr. Kelso narrowly escaped hanging at the hands of the people of Kingston, Mo., who, in the excitement of the moment, did not realize that Dr. Kelso had joined the Northern cause against his own desires. The people of Kingston were in sympathy with the cause of the South, and when Dr. Kelso’s enforced connection with the Federal army became known, a movement was started to hang him. Dr. Kelso expressed a desire to remain in the town and face the music but his wife implored him to flee. Equipped with bedding and food to last him several days, he rode horseback into the nearby woods and remained in hiding over night. The next day the excitement subsided and he returned. However, he soon made his departure from Kingston.

Dr. Kelso was born on a farm near Cincinnati, Ohio, Jan. 28, 1835, and there he remained until he was 15 years old. He moved to Gallatin, Mo., and remained there until he was 18 years of age. He taught school

at various places in Missouri, and studied medicine at the same time. In 1859 he married Miss Mary E. West, of Springfield, Mo., and later when he attended the Rush Medical College, of Chicago, from which he was graduated in 1865, his wife taught school to help defray the expenses of his medical education.

At a recent convention of physicians, Dr. Kelso was introduced as the oldest living graduate from the Rush College. He was introduced by the youngest graduate of that college.

Dr. Kelso was known throughout Southwest Missouri as an able specialist along certain lines, and in the treatment of small-pox, from which disease he had once suffered, he was especially skilful. For four years, Dr. Kelso's health had been failing, but with gritty determination he clung to his practice, even after his physical condition became so grave that his relatives were alarmed. About a year ago he was the victim of a severe fall on an icy pavement, which may have helped to bring on his last illness. He was taken ill in January, but recovered and continued to go to his office daily. Three weeks ago, he was again taken to his bed, and had not been able to be out since. He is survived by his widow and one son.

In addition to being a member of the Masonic order, he was a member of the Eastern Star, and of the Knights and Ladies of Security.—*Joplin Herald*.

Frederick Kidder, M.D.—College of Physicians and Surgeons, New York City, 1869; died at his home in Afton, Mo., July 26, from cancer of the liver, aged 66.

John A. Leavy, M.D.—St. Louis Medical College, 1857; an honorary member of the St. Louis Medical Society; surgeon in the Confederate service during the Civil War, died at his home in St. Louis, October 24, from cerebral hemorrhage, aged 76.

(Following Clipping from a St. Louis Paper.)

Dr. John A. Leavy, 76 years old, one of the oldest practicing surgeons of St. Louis, died at 11 o'clock last night from a stroke of apoplexy, at his home, 4340 Morgan street. He was apparently in good health up to within an hour of his death.

Dr. Leavy was a native of Philadelphia and came to St. Louis with his parents when a child. He was educated in the St. Louis schools and was graduated from St. Louis University and Pope's Medical College.

He entered the Confederate army and was a surgeon on Gen. Hardee's staff and later on Gen. Pettis, whose intimate friend he was.

After the war he practiced medicine in St. Louis. He was known as a student of languages and was proficient in French, Spanish and German, and wrote a book which has not been published, "The Memoirs of a Confederate Surgeon."

Justin Worthington Lamson, M.D.—Rush Medical College, 1867; a member of the Missouri State Medical Association and Board of Pension Examiners of Neosho; mayor of that city, and a member of the legislature; until a few days before his death superintendent of State Hospital No. 3, Nevada, died at his home in Neosho, January 16, from nephritis, aged 67.

Julius F. Menestrina, M.D.—Washington University Medical Department, St. Louis, 1890; a member of the American Medical Association; a veteran of the Spanish-American war; formerly of Iron Mountain, Mich.; died at his home in St. Louis, Mo., July 28, from paralysis, aged 43.

George W. Meneese, M.D.—Vanderbilt University, Nashville, 1879; a member of the Missouri State Medical Association; health officer of Clinton; died February 7, from the inhalation of fumes of formaldehyd, after disinfecting a house where small-pox had occurred, aged 54.

Bernard Wise Moore, M.D.—The body of Dr. Bernard Wise Moore, who died from pneumonia yesterday at his home, 4953 McPherson avenue, will be taken to Lynchburg, Va., today for burial. He was born there in 1871. The doctor was an alumnus of Washington and Lee

University and the University of Virginia, and took graduate work in the College of Physicians and Surgeons of New York. His first experience was three years work in the New York City hospitals. He came to St. Louis in 1896 and made a specialty of obstetrics and diseases of children. For the last ten years he has been an instructor of obstetrics in Washington University.

Dr. Moore was a member of the University Club, the Florissant Valley Club and the Bellerie Country Club and was a director of the St. Louis Medical Library Association.

He is survived by his widow, who was formerly Miss Edith Warfield, of Savannah, Ga. Dr. Sherwood Moore, a brother, lives in St. Louis.—*St. Louis Globe-Democrat*, Jan. 23, 1911.

Edwin Mills Nelson, M.D.—Miami Medical College, Cincinnati, 1874; a member of the Missouri State Medical Association; for ten years managing editor of the *St. Louis Courier of Medicine*; at one time lecturer in the St. Louis Medical College; clerk of the board of health, and attending physician at the Webster Orphan Asylum and St. Louis Maternity Hospital; one of the organizers of the St. Louis Training School for Nurses; died at his home in St. Louis, September 20, from disseminated sclerosis, aged 62.

James C. Nidelet, M.D.—Missouri Medical College, St. Louis, 1860; surgeon in the Confederate service during the Civil War; one of the founders and for several years professor of anatomy and dean of the faculty of McDowell Medical College, St. Louis; for four years a member of the board of police commissioners, and for two years vice-president of the board; died at his home, November 15, from heart disease, aged 76.

Warren Bell Outten, M.D.—Washington University, St. Louis, 1866; a member of the American Medical Association, and a prominent railway surgeon of the Southwest; died at his home in St. Louis, March 18, from pneumonia, aged 66. For thirty years Dr. Outten was chief surgeon of the Missouri Pacific Railway Hospital Department. He was consulting surgeon to the Missouri Pacific system and president of the National Association of Railway Surgeons. During the cholera epidemic in 1866, he served as acting assistant surgeon, U. S. Army. He was consulting surgeon to the St. Louis City Hospital, St. Luke's Hospital, the Baptist Sanitarium and Mount Santa Rose Infirmary. He was also president of the Interstate Medical Journal Company. Dr. Outten was an authority on railway injuries and was the author of a valuable work entitled, "Railway Injuries, Their Clinical and Medicolegal Features."

(Following Clipping from the *St. Louis Republic*, March 19, 1911.)

Dr. Warren B. Outten, 66 years old, a medical authority, and for thirty-six years chief surgeon of the Missouri Pacific Railway, died at 4:45 o'clock, March 18, 1911, of pneumonia. He lived at No. 3515 Pine street. He had been ill three days.

Dr. Outten was born Dec. 3, 1845, in Lexington, Ky. His parents, Warren and Mary I. (Morris) Outten moved to St. Louis when he was a small boy. He pursued his studies in the St. Louis public schools. From 1857-58 he attended Christian Brothers' Academy, which studies he continued in 1859-60 at Wyman's University.

Dr. Outten in 1866 was graduated with honors from the St. Louis Medical College. He then began his connection with educational work along medical lines, in which he soon gained great distinction. Soon after his graduation he was made professor to the chair of surgery in Humboldt Medical College, and in 1867 was elected assistant demonstrator in the St. Louis Medical College.

He acted as assistant surgeon in military service in St. Louis, being detailed to attend troops suffering from cholera. In 1869 he was elected professor of



anatomy in the St. Louis College of Physicians and Surgeons.

His railway medical connection, which was to bring him greater distinction and honor, began in 1876, when he was made supervising surgeon for the St. Louis, Iron Mountain & Southern Railway.

After making a careful study of his profession in relation to railway work, Dr. Outten originated the idea of the railway hospital, and in 1881 he established a line of hospitals along the Iron Mountain road. He was appointed chief surgeon of that road in 1884, and soon afterwards chief surgeon of the Wabash railroad east. He then established hospitals at Springfield and at Danville for the Wabash. In 1885 he was made chief surgeon for the Missouri Pacific, after which he immediately rebuilt the Fort Worth Hospital at Fort Worth, Texas.

Nine hospitals stand to his credit, at which there have been treated 96,934 patients.

Dr. Outten continually kept in mind the educational features of his profession. In 1892 he was elected president of the National Association of Railway Surgeons. From 1886 to 1901 he was dean of the Beaumont Hospital Medical Association, Missouri State Medical Association, former president of the St. Louis Medical Society, Academy of Science, St. Louis Surgeons Club and the Medical History Club. He belonged to the Cache Lodge, order of Masons, and was a member of St. John's M. E. church. In 1909 he was made consulting surgeon for the Missouri Pacific Railway.

Dr. Outten in 1877 married Miss Mary F. Burnett of St. Louis county, who survives him. He leaves one son, Burnett, and four daughters, Misses Lila and Olive, and Mrs. Martin Lambert, of St. Louis, and Mrs. C. H. Fisk, of Chattanooga, Tenn.

William Henry Pollard, M.D.—Dr. William Henry Pollard was the only son of Maj. Henry and Mrs. Courtney Pollard. He was born near Charlottesville, Albemarle County, Va., in March, 1834, and when a little over a year old he came to Pike County, Mo., with his parents where he lived until his death. He graduated from the St. Louis Medical College over fifty years ago and commenced the practice of medicine in Pike County, and won the confidence of the community, by his skill and attention to his profession and his pleasant and sympathetic manner, and courtesy to all. He stood high in the medical world, as a scholar and an able practitioner and his advice was often sought by his brother physicians. For several years he was president of the Pike County Medical Association. His friends were legion and he was ever welcomed in the home circle. He loved the church and a Sunday school class was his delight, where he was always in attendance unless professionally engaged. His Sunday school class will miss him and mourn their loss and in his church his active and heartfelt work will be missed.

When in his coming manhood, he married Miss Mary Adelina Goodman of Pike County. They were the parents of nine children—four of them have preceded him to the grave—two sons who died young; Mrs. Wm. N. Meriwether and Courtney, who died in her young girlhood. Those living are Mrs. Mary A. Bragg, of Eolia, Mo.; John C. (June), of St. Louis; R. L. Pollard, of Bowling Green, Mo.; Wm. Pollard, of Eolia; Dr. C. B. (Bing) Pollard, of Carthage, Mo. There are also six grandchildren.

Edwin Powell, M.D.—Rush Medical College, Chicago, 1857; formerly demonstrator of anatomy and professor of military surgery in his alma mater; surgeon of the Seventy-Second Illinois Volunteer Infantry, and later in charge of the Seventeenth Army Corps Hospital and the McPherson General Hospital during the Civil War; a member of the staff of Cook County Hospital; died at his home near Maryville, Mo., February 13, from influenza, aged 76.

John Perrie, M.D.—Of Mayview, Mo., graduated from Washington University, St. Louis, in 1867. Died in Eads, Colo., March 23, from peritonitis. Aged 70.

Ullman Ludwig, M.D.—Pennsylvania Medical College, Gettysburg, 1861; died at his home in Springfield, Mo., June 30, from cystitis, aged 80.

Faster F. Robinson, M.D.—Graduate Kentucky School of Medicine, Louisville, 1877; died at his home in St. Louis, Jan. 10, 1911, from valvular heart disease, aged 58.

Francis M. Moore, M.D.—Graduate Rush Medical College, 1876, and Kansas City Medical College in 1879; died at his home near Perry, Mo., Feb. 17, 1911, aged 55.

Frank R. Wyranski, M.D.—Graduate Ensworth Medical College, St. Joseph, Mo., 1906, died at his home in St. Louis, Feb. 6, 1911, from tuberculosis, aged 32.

Warren G. Priest, M.D.—Washington University, St. Louis, 1878; for eight years chief dispensary physician and since that time chief vaccine physician of the St. Louis Health Department; died at the Koch Hospital, St. Louis, January 11, from tuberculosis, aged 56. Dr. Priest rendered the city of St. Louis a lasting service while acting in the capacity of chief vaccine physician by stamping out small-pox as an annual scourge, thus rendering the maintenance of a small-pox quarantine unnecessary. Dr. Priest was 51 years old and unmarried. He was a graduate of the old St. Louis Medical College and passed practically all of his professional career in the service of the Health Department of St. Louis, as an intern at the City Hospital, as junior physician at the City and Female hospitals, as assistant and as vaccine physician. Following a nervous breakdown nearly two years ago, he was taken to the City Sanitarium, where he developed tuberculosis, from which he died. He was considered an authority on small-pox by city officials and by fellow physicians.

Patrick H. Perkins, M.D.—McDowell Medical College, St. Louis, 1855; for 45 years a practitioner of Linneus, Mo.; died at his home, April 14, from senile debility, aged 81.

Norman J. Pettijohn, M.D.—Kansas City (Mo.) Medical College, 1884; formerly a member of the American Medical Association; a Federal soldier and later assistant surgeon of volunteers in the Civil War; formerly chief surgeon of the Kansas City, Fort Scott & Memphis Railroad, and later assistant chief surgeon of the Frisco system; for several years chief surgeon of the Metropolitan Street Railway Company of Kansas City; once president of the International Association of Railway Surgeons and of the Jackson County Medical Society; died at his home in Kansas City, April 22, 1911, aged 71.

Thomas Hodge Johnson, M.D.—Eclectic Medical Institute, Cincinnati, 1879; a veteran of the Civil War; for several terms superintendent of schools of Laclede County, Mo.; a member of the Missouri legislature for three terms; died at his home in Springfield, April 24, aged 70.

George W. Ray, M.D.—Rush Medical College, 1867; a pioneer practitioner of Joplin, Mo., died at St. John's Hospital in that city, February 8, from pernicious anemia, aged 68.

Joseph Warren Cadwell, M.D.—Jefferson Medical College, 1836; Bellevue Hospital Medical College, 1866; of Chandler City, Mo., was suffocated by smoke in his room in that city, May 2, aged 72.

Gustav Fuchs, M.D.—Missouri Medical College, St. Louis, 1873; surgeon of volunteers during Civil War; died at his home in St. Louis, April 19, aged 74.

William Reilly, M.D.—University Medical College of Kansas City, Mo., 1874; of St. Louis; died in St. Mary's Hospital, in that city, April 24.

Oscar F. Pile, M.D.—College Physicians and Surgeons, Chicago, 1888; member American Medical Association, Tri-State Medical Association, Missouri Medical Association and Scotland County Medical Society, died at his home in Memphis, Mo., February 12, from duodenal ulcer, aged 52.

Dr. Pile was a man of superior attainments and ranked among the best practitioners of the state.

Francis Emory Ross, M.D.—Dr. Francis Emory Ross was born in Greene County, Mo., Aug. 26, 1838, and died Aug. 8, 1910, aged 72 years. He was the son of David Ross, a pioneer Methodist minister. He was the third of a family of twelve children, he being the first to die.

His early education was received in the old country school which was held in a log house. At the age of 17 he entered the Ebenezer College, which at that time was a prominent institution of learning in this part of the country. After attending there for several years, he began the study of medicine in the St. Louis Medical College, known as the Pope School. He attended one course of lectures there, the session of 1864-65. From there he went to New York and entered the Bellevue Hospital Medical College. He graduated from this institution in 1868. In 1870 he graduated from the College of Physicians and Surgeons, Medical Department of Columbia University, N. Y. He held special diplomas in Physical Diagnosis from Drs. Alfred L. Loomis and Austin Flint.

He was married in 1870 to Miss Sarah E. Bryan, of Springfield, Mo.

Dr. Ross was a member of the Greene County, the Southwest Missouri, and the Missouri State Medical Societies. He practiced medicine in Springfield for forty years and was one of the best known physicians in Southwest Missouri, where he enjoyed an extensive practice. Until the last year of his life he was a very regular attendant at the local Medical Society and took an active part in its proceedings.

Arthur B. Ralph, M.D.—Washington University, St. Louis, 1859; of Orrick; a member of the Missouri State Medical Association; died at the home of his daughter in Orrick, February 17, from pneumonia, aged 74.

"Dr. Arthur B. Ralph, one of Ray county's oldest native born citizens, died at the home of his son-in-law, C. M. Donovan, in this city, Friday evening, Feb. 17, 1911, of pneumonia fever, after an illness of only four days.

Deceased was born near this place on the 20th day of February, 1836, and was 74 years, 11 months and 17 days old at the time of his death. After reaching manhood, he studied medicine, was graduated from the St. Louis Medical College, and located in Missouri City for the practice of his chosen profession; and Nov. 7, 1867, was united in marriage with Miss Ellen Hardwick of that place, and to the union two daughters—now Mrs. E. L. Hunt and Mrs. C. M. Donovan—were born. Mrs. Ralph departed this life April 3, 1879. After her death the doctor went to the Black Hills country, where he remained two years, then returned to Missouri City and resumed the practice of medicine, and continued to live in that city until four years ago, when Mr. and Mrs. Donovan moved to Orrick, he retired from practice and came with them.

Dr. Ralph was an upright, Christian gentleman, member of the Christian church, and enjoyed to the fullest degree the confidence and esteem of all who knew him. The body was taken to Missouri City Sunday morning, where funeral services were held in the Christian church, conducted by Elder Ferguson, the pastor, and at their conclusion burial was made in the city cemetery."

John B. Stewart, M.D.—Graduate of Cincinnati College of Physicians and Surgeons in 1877; a member of the Missouri Medical Association; formerly a member of the pension examining board of California, Mo.; founder of the Clarksburg College; a member of the Missouri legislature in 1905; died at his home in Clarksburg, March 17, 1911, from cholecystitis, aged 73.

Charles H. Bernstoff, M.D.—Graduate of the Marian College of Medicine, St. Louis, 1897; a practitioner of St. Louis, died at the American Hospital in that city, April 2, 1911, from appendicitis, aged 45.

W. D. Snoddy, M.D.—Physio-Medical College, Cincinnati, 1850; of Warrensburg, Mo.; died at the home of his son in that city, September 30, from angina pectoris, aged 88.

George W. Stapleton, M.D.—Missouri Medical College, St. Louis, 1857; for sixty years a practitioner of Albany, Mo.; died at the home of his son in that place, December 21, from cerebral hemorrhage, aged 86.

Isaac N. Van Pelt, M.D.—Cincinnati; died at his home in Lamar, Mo., July 22, from rheumatism, aged 72.

James D. Wilkerson, M.D.—Missouri Medical College, St. Louis, 1882; a member of the Missouri State Medical Association; died at Cowgill, Mo., June 20, from cerebral hemorrhage, aged 58.

Edward D. Vandeverter, M.D.—"Edward D. Vandeverter was born Jan. 12, 1859, grew up to manhood in Audrain County, Mo., attended medical college at Missouri State University, Columbia, and Missouri Medical College, St. Louis, from which latter institution he received his degree in 1881. For six years he practiced with his father, who was also a physician in Audrain County, Mo. After that he moved to Ladonia, where he continued to practice his profession until his death.

"He was a genial, whole-souled, big-hearted, gentleman with a large degree of personal magnetism which drew every one to him. Mentally, he was very bright, faithful and conscientious in the discharge of every duty, a true physician of more than ordinary ability.

"On the night of July 4, 1910, while making a professional call about 11 o'clock p. m., while crossing the C. & A. R. R. track, he was struck by an approaching train, which, for some reason, he did not observe, and was instantly killed.

"He is survived by a wife and two children, and a large circle of relatives and friends. His wife and children have lost a faithful, loving husband and father, the community a 'beloved physician,' and the profession a worthy member and the country an excellent citizen."

Alexander Werth, M.D.—A graduate of the University of Berlin, Germany, 1860; died at his home in St. Louis, April 7, 1911, from septicemia, following amputation of the thigh; aged 70 years. Dr. Werth was a veteran of the Civil War and afterward, U. S. pension examiner in St. Louis.

Albert Badger, M.D.—Graduated at New Orleans sometime in the "forties;" for nearly seventy years a practitioner in Missouri; died at his home in Schell City, Mo., March 14, 1911, from senile debility, aged 89.

D. L. Whaley, M.D.—Missouri Medical College, St. Louis, 1888; died at his home in Browning, Mo., December 10, from disease of the stomach; aged 60.

Walter J. Wait, M.D.—Washington University, St. Louis, 1880; formerly coroner of St. Louis, but of late a practitioner of Joplin, Mo.; died at the home of his father-in-law in St. Louis, December 6, from amyloid disease of the kidney; aged 51.

Eli Wilson, M.D.—Barnes Medical College, St. Louis, 1896; of Puxico, Mo.; died in Hot Springs, Ark., Oct. 15, 1910, from valvular heart disease; aged 43.

In preparing this report, we have been without precedent to guide us and we are well aware of its imperfections. We have watched the notices published in *The Journal* of the A. M. A., from which we have gotten the greater number. We have also gotten some from the newspapers. Our appeal published in the April number of *THE JOURNAL* brought several reports from over the state, which we duly appreciate.

Doubtless, there are some that we have not gotten, but we have not intentionally omitted any one who was a member of the regular profession, whether he was a member of the State Association or not. In some instances, most worthy members, through infirmity or other good reason, have allowed their membership to lapse, while others may never have been members, but,



nevertheless, were faithful, worthy physicians. All such we have aimed to include.

We have done our best under existing conditions and hope that some better system may be evolved, whereby we may be able to collect and preserve in a more satisfactory manner, proper records of those of our comrades who have fallen by the wayside.

Respectfully submitted,

J. E. HARRIS,  
L. C. CHENOWETH,  
Committee.

### HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met July 13, 1911, at Maitland, Mo. This was one of the most interesting meetings ever held in this county, due largely to the splendid attendance which is the power of any society.

Our delegate, counselor and secretary gave good reports on the Missouri State Medical Association meeting held at Kansas City, yet some criticism must be offered since the different sections are carried on at the same hour making it impossible for the general practitioner to receive equal benefit with the man who does special work.

Drs. J. M. Davis, of Craig, Robert Forgave, and L. A. Todd, of St. Joseph, read very interesting papers.

Our next meeting will be held at Mound City, Mo., Oct. 5, 1911.

WILLARD C. PROUD, M.D., Secretary.

### SHELBY COUNTY MEDICAL SOCIETY

#### MEETING OF MAY 2

The Shelby County Medical Society meeting was held May 2, 1911, in Shelbyna, in Dr. Vaughn's office.

Dr. Carson reported a case with axillary abscess six weeks after an injury to finger.

Dr. Roy emphasized importance of looking for source of infection in enlarged glands.

Dr. Smith reported case of gangrene seen with Dr. Delaney of Emden.

Dr. Chapman reported a case of pneumonia followed by jaundice and ecchymotic spots over the entire body.

Dr. J. E. Roy, of Clarence, and Dr. C. E. Salyer, of Shelbyville, were elected members of the Society.

Dr. L. L. Smith, of Bethel, was elected censor to fill vacancy of Dr. Maddox.

Members present: Drs. Carson, Salyer, Smith, Roy, Chapman, Vaughn and Furnish.

#### MEETING OF JULY 6

The society met in Shelbyna, July 6, 1911.

Dr. Carson reported clinical case: woman 50 years of age who was operated on for mammary growth in March. She did well for a time, but now presents symptoms pointing to cerebral disease.

A discussion followed in which all members present took part.

Drs. Carson and Salyer exhibited the stomach of a man and gave a detailed history of the case. All believed it to be malignant.

Dr. Chapman reported an interesting post-mortem case; man died suddenly and, because of civil proceedings prior to his death, an inquest was held. There was a rupture of the arch of the aorta with no other apparent arterial involvement; also old abscess in appendiceal region that had opened externally leaving a mass of adhesions.

Drs. Vaughn and White read good papers on "Dysentery." Both believed local treatment of the greatest value.

Dr. Salyer had not seen a death where the characteristic black stool of Bis-Sub-Nit could be obtained which in some could not. He said he had observed

this many times but could not tell why. Dr. White said that clinically, dysentery was like the pneumonias in that a definite diagnosis was at times hard to make and that every case was a law unto itself.

Dr. Roy spoke of the interest taken and complimented the members for attendance and hoped it would continue.

Present were, Drs. Roy, Vaughn, Chapman, Smith, Battersby, Salyer, Carson, White, Furnish, Maddox and Wood.

A. M. Wood, M.D., Secretary.

### ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

#### MEETING OF JUNE 7

The regular meeting of the Society was called to order, June 7, 1911, Dr. S. F. Kessler, president, in the chair.

Officers absent: Drs. J. F. Owens and J. M. Bell.

Minutes of the two previous meetings were read and approved.

The following bills were allowed and warrants ordered drawn:

Lon Hardman, Printing, January to April inclusive, \$35.00.

Janitor Service at Savannah, May 6, \$1.00.

By regular motion the president and secretary were instructed by the Society to sign the necessary information papers to bring the charges made by Dr. F. H. Ladd against Dr. C. L. Holloway before the state board of health.

Reports from the State Association were made by Dr. Jacob Geiger, on Surgery, Dr. C. R. Woodson, on Psychiatry, and Dr. A. L. Gray, on Obstetrics.

Dr. Woodson made a further report as alternate delegate to the state association and was appointed to report the proceedings of the coming meetings of the American Psychological Association in Denver, Colorado, and the American Medical Association, in Los Angeles, California. He also extended an invitation to the members of this Society to meet on the first meeting night in September at his Sanitarium for a Social Session, which was unanimously accepted.

On regular motion the By-Laws were ordered suspended and the meeting of June 21 was changed to June 15, at Dr. A. L. Gray's Maternity Home, for a Smoker.

Members present, 17.

Adjourned.

#### MEETING OF THURSDAY, JUNE 15

Social Session at Dr. A. L. Gray's Maternity Home, 15th and Charles streets.

HERBERT LEE, M.D., Secretary.

## BOOK REVIEWS

DISEASES OF THE STOMACH AND INTESTINES. By Robert Coleman Kemp, M.D., Professor of Gastro-Intestinal Diseases, New York School of Clinical Medicine. Octavo of 766 pages, with 279 illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

The book has been written to fill as far as possible the want created by lack of opportunity on the part of the practitioner to devote himself to clinical study as he should.

While there are many good things in the volume the work reaches its high tide in the three chapters on Diverticulitis, Auto-Intoxication, and Typhoid Fever, respectively.

The very liberal use of photographs used to demonstrate methods of diagnosis and treatment is a commendable feature of the book.

The general practitioner, who for various reasons has been unable to give the Clinic the full consideration really requisite, will find in this work as adequate a substitute as it is possible to provide.

**MODERN MEDICINE. ITS THEORY AND PRACTICE.** In original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M.D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume VII, Diseases of the Nervous System, Mental Diseases, General Index. Just Ready. Price per volume cloth, \$6.00, net; leather, \$7.00, net; half morocco, \$7.50, net. Lea & Febiger, Publishers, Philadelphia and New York.

It is unnecessary to say much in behalf of a work of this character, where previous volumes have established a prestige as commanding as is that which is enjoyed by this series.

"Osler's Modern Medicine" is a household word in the "household" of medicine, and the last and seventh volume which completes the series comes fully up to the mark set by its predecessors.

It is devoted to diseases of the nervous system, and mental diseases and is written by recognized masters.

**GYNECOLOGICAL DIAGNOSIS.** By Walter L. Burrage, A.M., M.D. (Harv.). Fellow of the American Gynecological Society; Member of the Obstetrical Society of Boston, etc., etc. 8 vo. cloth. Pp. 656. Illus. New York & London. D. Appleton and Co., 1910.

The book has been written from a clinical standpoint. At the beginning of the chapters there is a summarization of the pathology and anatomy. Differential diagnosis receives extensive consideration, and searching chapters are devoted to diagnosis of the diseases of the bladder and rectum. There is likewise a masterly chapter on the diseases of the breast, and on the menopause and old age.

The volume will be found to contain many helpful suggestions; the fruit of a large experience in gynecologic practice.

An alphabetical index of illustrations is an original feature of the book.

Every chapter is headed by a résumé of its contents. The scheme of the work reflects greatly to the credit of the author, and the publishers should be proud of the fashion of its execution.

**A MANUAL OF OPERATIVE SURGERY.** By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., F.R.C.S., Sergeant-Surgeon to H. M. the King, Surgeon-in-Ordinary to H. R. H. the Prince of Wales, Consulting Surgeon to the London Hospital; and Jonathan Hutchinson, F.R.C.S., Surgeon to the London Hospital. New (3rd) Edition, revised and rewritten. In two octavo volumes. Volume II, 820 pages, with 302 engravings, and 8 full-page plates. Half-morocco, \$6.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

This volume contains the surgery of the head; neck and spine; thorax and breast; arteries, veins, and nerves; bones and joints, as well as the tendons, including the division of contracted muscles, ligaments, and fasciæ.

This volume comes up to the high mark set by the first, is a credit to its authors, and a valuable asset to the literature of surgery. The chapters on opera-

tions on the skull and brain, the middle ear, mastoid antrum and adjoining structures have been revised and largely rewritten by Mr. A. J. Walton; the chapter on tendon suture and tendon grafting is entirely his work. Sixteen colored plates and numerous illustrations have been added in this edition.

**PRINCIPLES OF THERAPEUTICS.** By A. Manquat, National Correspondent to the Académie de Médecine. Trans. by M. S. Gabriel, M.D., 8 vo. cloth, pp. 298. New York & London. D. Appleton & Co., 1910.

A most interesting volume, being an attempt to demonstrate the "reasonable doctrine of therapeutics." The introductory chapter is a résumé of the progress of medicine. The chapter on "The Action of Medicine," and that on "The Elements of Therapeutic Individualization" are perhaps the salient chapters in the book, though the whole is very good.

Intended for the "young physician," the more experienced practitioner will find the book entertaining and instructive, and even for the layman the volume has an interest. The translation is smooth and easy.

**PLASTIC AND COSMETIC SURGERY.** By Frederick Strange, M.D., Fellow of New York Academy of Medicine; Member of Deutsche Medizinische Gesellschaft, N. Y., etc., etc. 8 vo. cloth, pp. 511, illus. New York & London. D. Appleton & Co., 1911.

A practical book on the subject. Large on detail, and copious in illustration. A first class reference work, and its presentation of the different methods of procedure is clear and comprehensive. The Dermatologist will welcome the book.

**MODERN TREATMENT: THE MANAGEMENT OF DISEASE WITH MEDICINAL AND NON-MEDICINAL REMEDIES.** By eminent American and English authorities. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia; Physician to the Jefferson Hospital; Author of "A Text-book of Practical Therapeutics," "A Text-book of the Practice of Medicine," etc.; assisted by H. R. M. Landis, M.D., Medical Director to the Phipps Institute for Tuberculosis and Physician to the White Haven Sanatorium. In two very handsome octavo volumes, comprising 1800 pages, with numerous engravings and full page plates. Price per volume in cloth, \$6.00, net; half morocco, \$7.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1911.

This able work is one of the mile-stones along the way. It is thoroughly modern, careful, and concise. The theme of the work is "Treatment," and it has been executed by the leaders in the respective departments; written by those who, by reason of their experience, individual effort, and peculiar aptitude for their specialties, may be said to "have authority."

The first volume opens with a general section on pharmacology, including its relations to medicine and practice. This is followed by the therapeutics of non-medicinal agents. Vaccine therapy is fully discussed and considered from the standpoint of its recent advancement. A chapter on infectious diseases closes the first volume.

Volume two is devoted to parasitic, circulatory, digestive and respiratory diseases; nutritional and diathetic disease; diseases of the nervous system, genito-urinary, the skin, the eye, and the ear. No physician can well afford to be without the work; it is certain to win for itself one of the first places.

**THE PRACTICE OF SURGERY.** By James Gregory Mumford, M.D., visiting surgeon to the Massachusetts General Hospital; Instructor in surgery in the Harvard Medical School; Fellow of the American Surgical Assn., etc. 8 vo. pp. 1015. Illustrated. Phila-



delphia and London. W. B. Saunders Co., 1910.

This is a clinical surgery. The plan of the book is briefly: Diagnosis, Procedure, After-treatment.

It does not wander after the fashion of the average book of this nature, but its text is germane to the subject immediately in hand. It lacks the common fault of being too ambitious, and its treatment of surgical matters is direct and practical.

**DISEASES OF THE EAR, NOSE AND THROAT FOR THE FAMILY PHYSICIAN AND THE UNDERGRADUATE MEDICAL STUDENT.** By Henry Ottridge Reik, M.D., associate in Ophthalmology and Otolaryngology in the Johns Hopkins University, and surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore, Md. Assisted by A. J. Neilson Reik, M.D., surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore, Md. 8 vo. pp. 374. Illustrated. New York and London. D. Appleton & Co. 1911. Cloth, \$3.00. Half Leather, \$4.00.

A most excellent book on these diseases; not intended to be exhaustive, but for the purpose of familiarizing the general practitioner and the student with the affections of these special sense organs it is entirely adequate, and is a much needed and serviceable addition to medical literature.

**SURGICAL AFTER-TREATMENT.** By L. R. G. Crandon, A.M., M.D. Assistant in Surgery at Harvard Medical School. Octavo of 803 pages, with 265 original illustrations. Philadelphia and London. W. B. Saunders Company. 1910. Cloth, \$6.00 net. Half Morocco, \$7.50 net.

This book is precisely what its title signifies—a book on surgical after-treatment, and its consideration of that phase of surgery is broad and adequate.

The chapter on Vaccine Therapy calls for special attention.

**COLLECTED PAPERS.** By the Staff of St. Mary's Hospital, Mayo Clinic, Rochester, Minn. 1905-1909. Octavo of 668 pages, illustrated. Philadelphia and London. W. B. Saunders Company. 1911. Cloth, \$5.50 net.

A collection of clinical reprints. The matter herein appearing is not new, having come out in periodical medical literature from time to time; but its interest for medical men is none abated for that reason.

**HYDROTHERAPY.** A work on hydrotherapy in general, its application to special affections, the technic or processes employed, and the use of waters internally. By Guy Hinsdale, A.M., M.D., Secretary of American Climatological Association; lecturer on Climatology in The Medico-Chirurgical College of Philadelphia, etc., etc. 8 vo. pp. 466. Philadelphia and London. W. B. Saunders Co. 1910.

A modern and comprehensive book dealing with the use of water in therapeutics; embracing the treatment of diseases and the technic of the different procedures. A serviceable book.

**A TEXT-BOOK OF GYNECOLOGICAL SURGERY.** By Comyns Berkeley, B.A., M.D., and Victor Bonney, M.D. Large Octavo. Cloth, 392 black and white illustrations and sixteen colored plates. Price \$5.00 net, by mail \$5.25. Funk & Wagnalls Company, New York.

The first five chapters have to do with pre-operative preparation, embracing the mechanical features first, and lastly the preparation of the patient. The book is direct and lucid. The chapters on after-treatment call for special praise. The work represents the latest in English gynecology and covers the field thoroughly and well.

**DISEASES OF THE EAR, NOSE, AND THROAT FOR THE FAMILY PHYSICIAN AND THE UNDERGRADUATE MEDICAL STUDENT.** By Henry Ottridge Reik, M.D., assistant in ophthalmology and otology in the Johns Hopkins University, and surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore, Md. Assisted by A. J. Neilson Reik, M.D., surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore, Md. 8vo. Illust. Pp. 374. New York and London. D. Appleton & Co., 1911. \$3.00 cloth; \$4.00 half leather.

**DYSPEPSIA.** Its varieties and treatment. By W. Soltau Fenwick, M.D. (London), Doctor of Medicine of the University of Strassburg. 8vo. Pp. 485. Illust. Philadelphia and London. W. B. Saunders Co. Cloth. 1910. \$3.00 net.

This book is based upon the examination and treatment by the author of some 18,000 cases of dyspepsia. The subject is considered from the standpoint of Etiology, Diagnosis, Prognosis, Symptomatology, and Treatment. The general practitioner will find the book of very real value, and he should not neglect to place it in his library.

**A TEXT-BOOK OF PATHOLOGY.** By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia. Second Edition. Octavo of 856 pages, with 437 illustrations, some in colors. Philadelphia and London. W. B. Saunders Company, 1910. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

We are glad to see a second edition of this book. While the author claims it is intended primarily for the student, it seems to us that the volume is perhaps better adapted for the use of the practitioner. The fault of over-loading has been happily avoided, and in this new edition, which has been in fact practically rewritten, certain errors occurring in the first have been corrected and the whole brought up to date.

**HUGHES COMPEND OF THE PRACTICE OF MEDICINE.** Tenth edition. Revised and enlarged by R. J. E. Scott, A.M., B.C.L., M.D. P. Blakiston Son & Co., Philadelphia; 63 Illust. xvii+878 pages. Flexible Leather, gilt edges, round corners. 1911. \$2.50.

This edition of Hughes Practice has been thoroughly revised and much of it rewritten. Sections that were obsolete have been omitted; some of the older prescriptions have been discarded, and many new ones added. The sections on treatment are quite complete, and the prescriptions more numerous than is usually found in a book of this description. The number of charts and illustrations have been increased from 27 to 63. It is a useful epitome of practice.

**DISEASES OF THE NOSE, THROAT AND EAR, MEDICAL AND SURGICAL.** By William Lincoln Ballenger, M.D. Third edition, revised and enlarged; 506 engravings and 22 plates. Pp. 983. Philadelphia and New York. Lea & Febiger. 1911.

This third edition of this most serviceable work has been subjected to close revision, and many new features added; among them may be noted: the Canfield-Ballenger operation for the cure of chronic empyema of the antrum of Highmore; Fletcher's sphenoidal operation; Goldsmith's plastic operation for closure of recent perforation of septum; Sluder's operation for removal of tonsil with intact capsule. The general design of the work as a text-book for students and practitioners remains the same.

**PRACTICAL MEDICINE SERIES.** Comprising ten volumes on the year's progress in medicine and surgery, under general editorial charge of Gustavus P. Head, Prof. of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Chas. L. Mix, A.M., M.D.,

Prof. of Physical Diagnosis in Northwestern University Medical School. Vol. III. The Ear, Eye, Nose and Throat. 8vo. cloth. Pp. 365. Chicago Year Book Publishers. Series 1911. \$1.50.

The departments are edited as follows: The Eye, Casey A. Wood, C.M., M.D., D.C.L. The Ear, Albert H. Andrews, M.D. The Nose and Throat, Gustavus P. Head, M.D.

**PRACTICAL MEDICINE SERIES.** Comprising ten volumes on the year's progress in medicine and surgery, under of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Chas. L. Mix, A.M., M.D., Prof. of Physical Diagnosis in the Northwestern University Medical School. Vol. II. General Surgery. Edited by John B. Murphy, A.M., M.D., LL.D. 8vo. Cloth. Pp. 611. Chicago. Year Book Publishers. Series 1911. \$2.00.

A book on surgical diagnosis and operative technic comprising 31 general heads, which in turn are divided into 132 sub-sections.

**PRACTICAL MEDICINE SERIES.** Comprising ten volumes on the year's progress in medicine and surgery, under general editorial charge of Gustavus P. Head, Prof. of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Chas. L. Mix, A.M., M.D., Prof. of Physical Diagnosis in Northwestern University Medical School. Vol. I. General Medicine. Edited by Frank Billings, M.S., M.D., and J. H. Salisbury, A.M., M.D. 8vo. Cloth. Pp. 405. Chicago. Year Book Publishers. Series 1911. \$1.50.

General sections are: Infectious Diseases; Diseases of Lungs and Pluræ; Diseases of Heart; Diseases of Blood-Vessels; Diseases of Blood and Bloodmaking Organs; Diseases of Ductless Glands; Metabolic Diseases, and Diseases of the Kidneys.

**GOLDEN RULES OF PEDIATRICS.** Aphorisms, observations, and precepts on the science and art of Pediatrics. Giving practical rules for diagnosis and prognosis, the essentials of infant feeding, and the principles of scientific treatment. By John Zahorsky, A.B., M.D., with an introduction by E. W. Saunders, M.D. 8vo. Cloth. Pp. 284. Second edition. St. Louis. C. V. Mosby Co. 1911. \$2.50.

A book of maxims and suggestions by a pediatricist for the general practitioner. The demand for a second edition is sufficient evidence that the book is helpful to the practitioner.

**GOLDEN RULES OF DIAGNOSIS AND TREATMENT OF DISEASES.** Aphorisms, observations, and precepts on the method of examination and diagnosis of diseases, with practical rules for proper remedial procedure. By Henry A. Jables, B.S., M.D. 8vo. Cloth. Pp. 298. St. Louis. C. V. Mosby Co. 1911.

A cursive review of diagnosis and treatment of diseases of the stomach, intestines, lungs, and infectious and constitutional diseases.

**THE CARE AND TRAINING OF CHILDREN.** By Le Grand Kerr, M.D., of Brooklyn, Funk & Wagnalls Company, Publishers. 12mo. cloth, 75c net; by mail 82c.

The whole welfare of the child; physical, mental, and moral, is here considered from the standpoint of a parent and a physician. Parents should find this little book an extraordinary help in the problem of child training.

**DISEASES OF THE STOMACH AND INTESTINES.** By Boardman Reed, M.D. Third edition thoroughly revised and largely rewritten. Illust. Cloth. Pp. 1,037. New York, E. B. Treat & Co., 1911. \$5.00.

The third edition has been subjected to a thorough revision, with the addition of a chapter on Arterio-

sclerosis and Its Relations to the Affections of the Gastro-Intestinal Tract.

The revision of the chapters on the examination of the urine and the feces was undertaken by Prof. Black of the University of California, while Dr. W. P. Millspaugh of the same institution in conjunction with the author reviewed the literature in the various languages on ulcer, carcinoma, etc.

Dr. J. P. Reynolds, lately of Philadelphia, has almost entirely rewritten the sections on Surgery of the Stomach and Intestines, and Intestinal Obstruction.

## CATALOGUE ST. LOUIS MEDICAL LIBRARY 3525 Pine Street

(Continued from page 48)

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### ORIGINAL ARTICLES

#### OBSTRUCTION OF THE MALE URETHRA

A Résumé, with Report of Cases \*

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##### BRIEF RÉSUMÉ OF THE HISTOLOGY OF THE URETHRA

This paper is a resume of the literature and personal observations on male urethral obstructions. References to certain pathological conditions of the male urethra will be omitted, since they, from their nature, do not cause obstructive changes, and other phases of this subject are only briefly considered to avoid extending it beyond a reasonable limit. A few references will be made to the development of the urethra, so that in considering the congenital defects mentioned a reasonable explanation will be offered for their occurrence.

It will be borne in mind that at about the sixth week of gestation the cloaca, which prior to this period is merely a cleft, becomes surrounded

by a circular fold which, in the continuity of its development, forms a genital ridge. Rising anteriorly from this is the genital papilla, while a furrow, developing shortly afterward on the interior surface, extends downward into the cloacal cleft, this latter development being of importance because it presents a distinct interest in regard to certain conditions discussed later.

This genital furrow very soon becomes deeper and is surrounded by the genital folds. It is not, however, until the twelfth week of intra-uterine life that the cloaca divides, forming the anus on the one part and the urogenital opening on the other. This division seems to be directly correlated with the development of the perineal body. This change gradually proceeds until a rudimentary penis is developed from the genital papilla, which occurs about the sixteenth week. Simultaneously the furrow situated below, referred to as the urogenital sinus, develops with the rudimentary penis. The sinus gradually sinks deeper until finally the edges unite above, forming the urethra.

It is very important to remember the claim set forth by Tournoux that the parts of the urethra situated within the glans and the penis proper develop at different times. He urges that this is proven by the fact that the urethral sinus at this stage of development is found on the body of the penis, while the glans is entirely without it. If we accept this hypothesis, we can, of course, explain the development of the urethra of the glans only by assuming that it is the outgrowth of epithelial cells which develop on the under surface of the glans penis.

Jarjavay pointed out that a small fold of mucous membrane found occasionally in the posterior portion of the fossa navicularis, not far from the meatus and including the entire upper wall, is additional proof of Tournoux's contention. From personal studies of cases with congenital defects, I am inclined to accept this explanation.

Kaufman, on the other hand, disagrees with Tournoux, believing this fold to be a rudimen-

\* Read in symposium at the annual meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



tary septum, which at one time existed between the dermal invaginations of the glandular and the penile urethra.

Reference to the foregoing will be made in considering obstructions due to congenital anomalies.

#### CONGENITAL DEFECTS

The entire absence of the urethral canal where a penis exists is extremely rare. A review of the literature discloses but seven cases of this character. The urethral canal replaced by a hard cord has been noted in a few instances. An incomplete obstruction of the passage has been reported much oftener, and this kind of obstruction is frequently observed in patients where the external meatus is covered by a growth of skin. This condition exists during the latter months of intra-uterine life, and is usually dispelled by a rupture due to the expulsion of the contents of the bladder. If we refer to the studies of the embryologists, we find an explanation for this deficiency of the glandular urethra or imperforate glans penis. This deficiency is marked by a slight depression in what appears to be a normal organ, and may involve more or less of the canal. With this malformation there are usually associated other congenital malformations of the pelvic organs. A child with such an error of development usually dies before birth, as the bladder becomes overdistended, too great a pressure is exerted on the umbilical vessels, the fetal circulation is cut off, and death results. This will happen unless the urine is discharged through a patent urachus.

There are, however, cases recorded in which a living child has been born with complete retention due to an occlusion of the meatus. Where the obstruction can be at once located and relieved, the prognosis is not usually unfavorable. A distended bladder, with extreme restlessness of the child, confirmed by the absence of urination, is sufficient to call attention to this abnormality. Where the obstruction is located near the end of the organ, prompt relief may be procured by completing the canal by a small incision. I recall having seen a case shortly after birth in which the symptoms noted were present, and on examination proved to be an imperforate meatus. The skin covering the meatus was thin, and attempts at micturition were followed by a slight ballooning. An incision promptly relieved this condition, and between eight and nine ounces of urine were at once discharged.

While complete obstruction of the meatus is usually observed immediately after birth, incomplete obstruction, if in the form of congenital stricture, may escape observation until much later, and such strictures are found, in a limited number of cases, throughout the urethra. Naturally, the type of congenital strictures which we detect most frequently is the stenosis of the

external meatus, and this narrowing may be extremely small, admitting only the finest probe. A number of such cases have come to my attention and have been promptly relieved by enlarging the opening of the meatus. Nervous symptoms are often accounted for by this condition, and, when present, should be relieved by enlarging the meatus so as to make it correspond with the normal caliber of the canal.

In case of an imperforate glans—where the canal for a distance is impervious within the glans penis—Voilemier recommends the insertion of a needle or trocar in order to develop a communication with the normal urethra, and then keeping the freshly-made canal open by gradual dilatation. If this cannot be done, it is advisable to produce an artificial fistula behind the obstruction.

While obstructions in the extreme anterior portion of the canal are more readily recognized and corrected, those that occur in the posterior portion are difficult to correct and decidedly more serious as to prognosis. Attempts have been made in such cases to perform an external perineal urethrotomy.

The conditions just described cause more or less serious disturbance during intra-uterine life, or shortly after birth, while partial obstructions may not demand attention until much later. Guion distinguishes two varieties of partial obstructions, which he classifies under the term "congenital strictures," subdividing this class into the cylindrical and the valvular. Both are usually found in the cavernous portion of the canal. The cylindrical type is extremely rare, while the valvular, though by no means common, is more frequently encountered. We know that in all parts of the urethra there are membranous valves, which may interfere with the passage of the urinary stream, and a membranous pocket is usually found at the posterior end of the fossa navicularis. Segall and Schlagenhauser have each described a case in which there was valvular closure in the region of the prostatic urethra, with dilatation of the bladder, ureters, and pelves of the kidneys.

A diverticulum is a constant finding of more or less extent on the interior aspect of the urethra, just back of the glans and extending posteriorly in some cases to the root of the penis. In exaggerated cases this may vary in size from that of a hazelnut to that of an orange. The interior of these pouches is invariably lined with urethral mucous membrane. This evidence assures us that the condition described can be accounted for by the development of the urethra just before the glandular and the penile portions unite. In these cases, the stenosis persisting, the size of the diverticulum corresponds to the amount of overdistention. If the canal is subsequently opened by rupture, these diverticula may persist and become an inconvenience to the

extent that the patient is compelled to empty them during the act of micturition. The diagnosis is simple, as a sacculation may be felt behind the glans, and this sacculation becomes distended during the act of micturition.

A little patient, 8 years of age, with this condition was seen by me a few years ago, and his mother informed me that the abnormality had existed since birth. The diverticulum became distended at each act of micturition, assuming the size of a hen's egg. The meatus was not small, and admitted a No. 9 American sound. Excision of the redundant portion of the sac and suturing the edges over the sound completed the operation, which proved to be successful.

The condition formerly supposed to be a fistula of congenital origin is now believed to be a double urethra. It usually exists on the dorsal surface of what otherwise appears to be a normal organ. This passage is usually about one-half of an inch in depth, and microscopically shows a lining of mucous membrane at some point posterior to its opening on the glans. It may be a blind passage, or it may discharge into the urethra at some point, or in rare instances open directly into the bladder. A good deal of study has been devoted to this peculiar anomaly. Luschka, Pribram and others hold that it is an excretory duct of a displaced tubule of the prostate gland; another, Clebs, that it is a healed epispadias, while it remained for Englisch to demonstrate that these passages were true rudimentary secondary urethras. In all, fifteen cases of this condition have been collected in medical literature. It is interesting to note that, in reviewing the reports of these cases, the majority stated that their very existence escaped attention until a discharge was noticed from their rudimentary openings, which was demonstrated to be a gonorrheal infection. Two examples of this condition have been seen by me, and in each the opening was so small that it was very difficult to trace the passage backward by introducing any kind of an instrument. The injection of a solution of nitrate of silver by means of a hypodermic syringe effected a cure.

Epispadias and hypospadias are due to arrested development of the penis and scrotum. Neither of these conditions produces actual obstruction, and therefore their consideration does not fall within the scope of this paper.

Recently at the City Hospital my attention was called to an example of what is known as *virga palmata*. It consists of a fold of skin which starts at the site of the attachment of the frenum and extends downward toward the scrotum. In this case it caused considerable flexion of the penis on erection, which obstructed the flow of urine when urination was attempted during that period. A congenital cyst had existed at the end of the prepuce from birth in this patient.

#### INJURIES CAUSING OBSTRUCTION

Injuries to the urethra causing obstruction, either temporary or permanent, may be produced by many causes among them being faulty manipulation with catheters and sounds, fragments of calculi or other foreign bodies, and incised, punctured and lacerated wounds. The pendulous urethra being more exposed, we find the majority of injuries affecting this portion of the canal. Experience has taught me that when wounds are clean-cut and in the longitudinal axis, they heal without suturing and, as a rule, without much contraction of the lumen, while transverse wounds are invariably followed by stricture formation. Wounds of the urethra may be caused also by indirect violence, as, for example, falls on the perineum or blows, fractures of the penis during copulation and injuries. The usual classification of injuries to the urethra is the one adopted by Terrillon. He divides them into, first, interstitial rupture without injury of the mucous membrane; second, rupture of the mucosa and submucosa; third, rupture of the urethra through all its layers.

By far the most frequent cause of lacerations of the deep urethra is a fall from a height astride some firm object, such as a beam; sometimes by being thrown against the pommel of a saddle, etc.; occasionally by direct violence, such as a kick; or as a complication in the fracture of the pelvis; or by being caught under falling structures. These injuries result very often in complete obstruction, with or without injury to the urethra. Recently I had occasion to operate on a man who had fallen from a height across an iron girder. On admission to the hospital about twenty-four hours after the infliction of the injury, and after having been taken to the city in an ordinary freight car, his condition was anything but favorable. The bladder was distended above the umbilicus, and the perineum and scrotum were swollen and deeply ecchymosed. He was suffering from considerable shock, the pulse was rapid and thready, and the temperature was subnormal. I followed in this case the same procedure that I have adopted in dealing with cases of retention with infiltration due to impassable stricture—namely, promptly performing a suprapubic cystotomy, followed by retrograde catheterization, and incision through the perineum at the point of rupture or stricture, as the case may be. Introduction of a sound or catheter through the anterior urethra is the next step. If it is possible at this time to restore the canal, I do so, and in this event I immediately close the bladder wound, the method adopted being decided by the exigencies of the occasion. Much time can be saved, both in complete obstruction of the canal from injury and in impassable strictures, by adopting this method, and is better than attempting an external ure-



throtomy without a guide. In all acute injuries to the urethra, the same general surgical indications are present as exist in traumatism elsewhere in the body.

#### FOREIGN BODIES CAUSING OBSTRUCTION

In this paper will be briefly considered foreign bodies which obstruct the canal—those that enter the urethra from the bladder, those derived from external sources, those formed in the urethra, and finally an example where the foreign body was introduced into the urethra through a perineal wound.

Fragments of calculi, portions of tumors, clots of blood, and portions of suture material or gauze introduced into the bladder during an operation, may be forced during the expulsive effort of the bladder into the urethra, become lodged there, and eventually cause obstruction.

Those obstructions derived from external sources include a multiplicity of objects, and the literature on the subject contains a large list of various articles. The list may include portions of instruments and catheters which have become broken off by accident, or—which is by far the most common cause—the obstruction may have been introduced by the individual to satisfy some erotic desire, or may have been the act of mental defectives. The articles include all kinds of objects, as bits of wood, hair pins, fruit pits, etc., and their removal can be accomplished, as a rule, only by the careful use of the endoscope. In some instances it may even be necessary to open the canal from the outside.

The third group of obstructions—those developing within the urethra—is principally calculi, which develop around a nucleus of some character.

The fourth class of obstructions—those introduced through a perineal wound—is extremely rare. During last winter I had occasion to report such a case before the meeting of the North Central Branch of the American Urological Society. This patient was operated on by me before a senior section of students from the St. Louis University School of Medicine. He applied at the City Hospital for relief, and was assigned to my service. He gave a history of having been operated on in a hospital about four months previous for an impassable stricture of the deep urethra, complicated by infiltration of the surrounding tissues and urinary fistulae. An external urethrotomy had been performed, and a portion of a large-sized catheter had been introduced through the perineal wound into the deep urethra and bladder for drainage purposes. While the patient was convalescing (the tube being still in situ) he escaped from the hospital where he was at the time being treated. The external portion of the catheter had become buried deep within the wound, unnoticed by the patient, and the external wound had healed over it. The patient,

not knowing that the tube was within his canal, gave a history on his admission to our City Hospital which conformed in every detail to a recontraction of the stricture at the old site.

Persistent and repeated attempts by me to pass any form of instrument into the bladder was without avail, and, inasmuch as two urinary fistulae had developed, I advised and proceeded to perform an external urethrotomy. This was indicated on account of the existence of the fistulous tracts, which required division. After cutting down through the perineum, I introduced my finger into the deep urethra and found it impinged on a hard object, which puzzled me greatly for the time being. This object proved to be the piece of catheter which had been inserted and which had slipped in after the first operation about four months previous.

The interesting point in this case, and one which makes the report of it unique in medical literature, is that as long as the lumen of the catheter remained open, function was carried on with comparative ease, but gradually the lumen became clogged with the deposit of urinary salts and eventually became blocked completely, causing exactly the same chain of symptoms as would be produced by the complete blocking of the canal from stricture formation.

#### PATHOLOGICAL PROCESSES WITHIN THE URETHRA CAUSING OBSTRUCTION

Under this heading comes that cause of obstruction which is by far more frequent than all others combined—namely, strictures as the result of gonorrhea, followed in turn by the effects of local tuberculosis, venereal sores of every description, and such other inflammations which result in contractions of the canal, dependent not alone on venereal infection, but as the result of improper treatment and rough handling with local applications.

By strictures we mean that the lumen of the canal has become diminished in size by a diseased process of the wall. This definition is the one adopted by Dittel. Strictures may be divided into three classes and, as a matter of simplicity, I believe such a division to be the most practical. Various authorities and writers have adopted other classifications, dependent on position, structure, and other view points. A clear conception can, however, be had by the simple division suggested, and I shall divide the strictures into spastic strictures, inflammatory strictures, and organic strictures.

#### SPASTIC STRICTURES

Spastic strictures are due to a spasm of the musculature of the posterior urethra, and are usually the symptom of other diseased processes, such as inflammation of the urethra, of the bladder, or of the rectum. In neurotic subjects they

are frequently the result of psychic influences—fright, fear and shock. The treatment consists of baths, both hot and cold, morphin suppositories, and careful catheterization. This treatment does not, of course, apply in cases of organic strictures.

#### INFLAMMATORY STRICTURES

The cause of inflammatory strictures is to be found in inflammation of the mucous membrane of the urethra in combination with swelling and edema. They occur most frequently as an accompaniment of acute inflammations, and more rarely with chronic inflammations of the urethra. They produce a temporary obstruction of the canal.

Under this head may be classed also obstructions which sometimes cause complete retention, the result of operations for hemorrhoids and operations on the anus or rectum. In such cases it may be necessary to introduce a catheter as long as the swelling remains.

While not properly a stricture, I include under this head compression of the canal due to inflammation or swelling of the entire body of the penis, the result of erysipelas or bands placed around the organ. On one occasion I observed the result of a glass ring which had been slipped over the penis, tightly encircling it, causing intense edema and obstruction of the canal.

#### ORGANIC STRICTURES

Etiologically, it is convenient to divide organic strictures into inflammatory cicatricial and traumatic cicatricial strictures. The latter results from lacerations of the canal which have been unsuccessfully treated, and sometimes by foreign bodies, wounds of various descriptions, and the extrusion of calculi from the bladder. The inflammatory cicatricials are by far more common, and are the type which are usually met with in practice. They are the result of gonorrheal processes of long standing. In those cases not due to gonorrhea they are due, in the main, to urethral chancre, chancroid, diphtheria of the urethra, or the application of caustics to the mucous membrane. They are usually seated at the junction of the bulbous and membranous portions of the canal. Thompson, the English urologist, claims that more than two-thirds of all gonorrheal strictures are limited to the deep urethra.

#### TRAUMATIC CICATRICAL STRICTURES

Traumatic cicatricial strictures are, as a rule, slow in developing, the first indication usually noticed by the patient being that the size of the urinary stream is smaller.

The consideration at this time of either the results of strictures, or the methods of diagnosis, prognosis and treatment, is not within the scope of this paper. It will be proper, however, to

summarize in a tabulated form the methods usually adopted in the treatment of this class of obstruction, as follows:

1. Cauterization.
2. Electrolysis.
3. Dilatation.
4. Internal urethrotomy.
5. External urethrotomy.
6. Excision of the scar.
7. Suprapubic cystotomy, with retrograde catheterization.

Tuberculosis may cause obstruction, either on account of the ulcerative process with the attendant inflammation, or by producing cicatricial changes after healing. Primary tuberculosis has been noted which was due to direct infection by the tubercle bacillus. The effects of chancroids of the urethra and chancre may produce obstruction, and care should be taken in treating these to avoid stricture by the injudicious use of cauterizing agents. I have seen a number of cases of very nearly complete stenosis due to this cause, and I recall an instance of this kind where the actual cautery was used to arrest the ravages of a chancroid. The process had been allowed to heal without seeing to it that the canal was kept dilated, and the result was a tight stricture.

#### TUMORS OF THE URETHRA

Tumors of the urethra may be divided into benign and malignant. Under the benign group the principal ones are papillomata and polypus. The former are due to a proliferation of cells from the papillary layer into localities that are devoid of epithelium, and are usually the result of a gonorrhea or some other inflammatory process. They are, as a rule, more prolific in their growth near the orifice of the canal, the proliferations decreasing as they approach the deep urethra. Stricture may result when they are removed, causing obstruction. For this reason it is suggested to continue dilatation after removing them. Polyps should be removed with a snare, and do not usually recur.

While primary malignant growths of the urethra are rare, secondary malignant growths are more often found to exist. These are usually the result of extension of this disease from the prostate, Cowper's glands, corpus cavernosum, or the glans penis. Primary carcinoma of the urethra is usually a development at a site which has been the seat of a chronic irritation, such as strictures, chronic ulcerative processes, or diseased condition of some of the glandular structures of the urethra.

Sarcoma of the urethra is most rare. I had the opportunity of seeing a specimen of this growth of the canal in a patient of Dr. Mark, of Kansas City. In this case the sarcomatous development resembled multiple papillomata, with



the difference that they became more numerous as they extended toward the bladder neck, in contradistinction to the reference made above in regard to the diagnosis of benign papillomata. The treatment in these cases should be radical, and the diagnosis made as early as possible. Endoscopy and microscopical examination are the best means we have for reaching an early diagnosis. Whether any permanent benefit can be obtained by attempting to remove only the growth and saving the organ seems doubtful. Complete extirpation of the penis and involved glands, though drastic, offers less likelihood of recurrence.

The consideration of this paper may result only in calling attention to an important subject that is fraught with great possibilities for discussion, and, if this has been attained, I shall feel that I have accomplished at least something toward the fulfilment of my desire to present a matter of such great interest.

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#### CIVIL MALPRACTICE \*

HON. EDW. J. WHITE

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In our modern age of commercialism, when the great majority of people attempt to place everything at a commercial profit, even the ills of the flesh are regarded by some as a commercial asset and for every injury a corresponding damage and compensation is sought.

The law but keeps pace with the transactions of the human race, and in this present age of damage suit litigation the medical profession is not exempt.

Aesculapius was deified by the ancients because of the gratitude of mankind for his service in the healing art. All power was then believed to come from the gods and all diseases also came from them; but this is not in accord with modern notions. From the ancient mythology of deities, who were regarded as a higher order of men, the followers of Hippocrates have been levelled to the order of other ordinary human beings, responsible alike for their contracts and their torts, and here runs the vivid line of distinction between the ancient classic world and the modern.

In the progress of civilization and the restlessness of our age the tendency to emphasize individual right has kept pace with the evolution of popular government. The old rule, that wherever there is a right there is a remedy in the law, has given place to the new doctrine, that for every injury there is a corresponding effort at redress.

The growing volume of damage suit litigation has fastened itself on the medical profession, as well as the trades and other professions, and it ought to be of especial interest to all physicians to understand the basis of the liability for this class of actions.

Malpractice, literally meaning bad practice, or negligence, has for its foundation the violation of the legal duty which the physician owes his patient, his profession, or the state. In other words, malpractice is the bad professional treatment of disease, pregnancy, or bodily injury, from reprehensible ignorance or carelessness, or with criminal intent.

Malpractice may be divided into three kinds: (1) Ethical malpractice, in which persons claiming to be physicians bring suits against other physicians or medical societies for alleged insults to their professional dignity. (2) Criminal malpractice, which is the unlawful or criminal practice of medicine or surgery, arising from a violation of the criminal laws of the state or nation. (3) Civil malpractice, in which patients bring suits for damages claimed to have been sustained through a want of skill or for negligence on the part of their attending physician.

Suits under the first classification are generally filed by quacks, who violate sections 3 and 4, article 1; chapter 2, of the Code of Ethics of the American Medical Association. We do not here propose to consider their transactions, nor the unlawful acts of those men claiming to be physicians who administer drugs or perform operations for some unlawful purpose; but civil malpractice, or suits for damages against the great army of reputable and skilful physicians for alleged injuries due to ignorance or negligence is the subject of these pages.

Physicians and surgeons who hold themselves out to the world as such, legally engage that they possess the ordinary and reasonable qualifications of their profession: and they are bound to exercise ordinary care, skill and diligence in treating the sick or in performing an operation. Unlike the common carrier by rail, from whom our modern jurists, in keeping with the popular demand, have exacted the highest degree of care, physicians and surgeons are answerable only for a failure to use reasonable or ordinary care, defined to be such care as an ordinarily prudent and skilful physician would exercise under the same or similar circumstances. This is the duty for the breach of which a corresponding liability arises, which the law denominates negligence.

The care, skill and diligence which the average physician and surgeon possesses and exercises in the general neighborhood—not the highest and best in the whole country, nor the highest and best in that neighborhood—is, therefore, the test. The law makes due allowance, in the application of this test, to the variations resulting from various circumstances and conditions,

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and the standard required in a sparsely settled locality, a long distance from the center of learning, would not be as high as that exacted from a practitioner in a large city, with all the modern advantages for observation and study.\*

Civil malpractice occurs, ordinarily, in two classes of cases: (a) In cases arising from the ignorant administration of medicines, or where treatment is administered which is calculated to and does actually produce harmful results; and (b), where injuries arise from the negligence of the physician or surgeon,—as where he fails to render such attention as the disease and situation of the patient required.

The cases may be grouped under one or the other of these subdivisions and the most frequent causes for such suits are accidents due to some one or more of the following sources: (1) From septic or other infection; (2) from uncertainty as to how to treat a certain wound or disease; (3) from the administration of an impure or a wrong drug, or an over-dose of a certain drug; and (4) death from the administration of anesthetics.

As a precautionary measure before the administration of any anesthetic, the law exacts all the preliminary measures with reference to the purity of the drug; the skillfulness of the assistant; the proper examination of the patient and the means for resuscitation. (Shearman & Redf. on Neg. Sec. 439.)

The procedure and the functions of court and jury are not essentially different in actions for civil malpractice than in other actions for negligence. The legal questions in such actions, to be settled by medical testimony, generally speaking, are, (1) did the physician, in his treatment of the case, display a want of knowledge of the science or principles of his art which are the common property of the profession in the locality, and which have been established long enough to be known to those possessing ordinary skill? (2) was there any departure from the established rules governing similar cases, and, if so, was there sufficient reason for such departure; (3) was there an ordinary amount of care bestowed on the case, when judged by that used by ordinarily prudent men in the profession? It is not always easy to say what constitutes ordinary care and skill, and when it is established, since there is no fixed standard of comparison by which the question can be solved, each concrete case

must stand alone and be considered in connection with the time, the place and other surrounding circumstances and conditions. Practitioners who see disease and accidents under varied forms and those connected with large hospitals are to be judged by their opportunities as compared with those in remote localities lacking these facilities. Hence it is that the least amount of skill with which a fair proportion of the profession of the given locality is endowed, is the proper criterion by which to judge of the given physician's ability or skill. (Broom's Inst., Sec. 1004, 1005.)

Where the evidence is conflicting, the issues are for the jury, under proper instructions from the court. The ordinary science, like the customs of every-day life, is presumed in these cases to be known to both court and jury, but if there be facts which are really of importance in a given case, and the court has not instructed the jury thereon, while these facts should not enter into the determination of the cause, the jury are none the less frequently influenced thereby. While the principle obtains that the jury is confined to the investigation and consideration of facts and the application of the law as laid down by the court, in these damage suits against corporations and professional men the charge of the court does not always bind the jury: in such cases, they frequently have opinions of their own, usurping the functions of the witnesses and the court and they have a law of their own, by which they sometimes trample on the prerogative of the court and the right of the defendant alike. This is known to lawyers, as the common law of juries, as distinguished from the common law of England.

But of course the profession ought not to act on the idea, in all these cases, that the right always preponderates on the side of the defendant. Men professing to treat the sick, on grounds of public policy, must be held answerable for a reasonable degree of care and skill in the practice of their profession. The concern of the state for the lives of its citizens could not require less than reasonable or ordinary care and skill, for it would be highly rash and disastrous for the unskilful and negligent to undertake transactions of this nature, and the object of the law is to deter ignorant and negligent people from endeavoring to gain a livelihood by the practice of a profession which cannot be followed without a great hazard to the lives of those who have to do with it. An injury from the administration of drugs or the performance of a surgical operation by an intoxicated physician, would, and it should, be held negligence in a given case and the failure to give such treatment as the situation of a patient required, or the ignorant administration of the wrong drug or the unskilful performance of a surgical operation, are hazards against the occurrence of which the law must furnish the proper redress. However, if the operation had to

\* Illustrative of this distinction and of the doubtful type of the ordinarily skilful country practitioner, I once accompanied a physician friend when he was called in consultation, near a small hamlet in Northwest Arkansas, to the bedside of a patient suffering from a severe case of pneumonia. The attending physician, like Pilpay's "Ignorant Physician," who, though void of knowledge and experience, yet presumed to call himself a physician, lacked neither stature nor girth and was famed for his good fellowship for miles from the little "still" and postoffice where he practiced. He advised my friend that the patient had a bad cold and some fever and he had finally "dissented" to a consultation. When asked as to his treatment he replied that he had been giving syrup of rhei, in ordinary doses; and this is one drug that I will never forget.



be performed under unfavorable conditions, or in an emergency, this would ordinarily constitute a good defense by the physician, although the treatment was not the best that could have been administered. Likewise the contributory negligence of the patient, by which the injuries are augmented, is a defense, as where the patient neglects to follow the reasonable directions and instructions of the physician. The same rule obtains when the physical weakness of the patient or his natural temperament contributes to the injury, and since a physician is not responsible except for injuries due directly to his own ignorance or negligence, when the injury is due proximately from the negligence of nurses or attendants, the physician will not be answerable unless he was near enough at the time to become aware of such negligence and to prevent it. (McClelland, Malp. 344.)

At the common law no action could be maintained by a widow or widower or other relatives of a deceased person to recover damages for an injury resulting in death due to unlawful violence or negligence. If the injury did not result in death an action could be maintained, by the sufferer, but actions for personal injuries died with the injured person. This was remedied, however, by an English statute, known as Lord Campbell's Act, passed in 1846 (9th and 10th Vict., ch. 93), which has been very generally adopted in the different American states and in Missouri and most of the other states, now an injury due to negligence which causes death is actionable. The damages recoverable in actions for death from negligence in Missouri are fixed at any sum, in the discretion of the jury, from \$1 to \$10,000 (R. S. Mo., 1909, Sec. 5427), but the recovery is unlimited in injuries not resulting in death. Compensation is recoverable for the pain and suffering which the injury occasions together with a consequent pecuniary allowance for any permanent injury sustained, and in case of death the widow or children, while denied a recovery by way of a solace for their wounded feelings, are entitled to damages for the pecuniary loss sustained in consequence of the death, together with punitive or exemplary damages when the death was intentional or was the result of malice or ill will.

In all cases of expert evidence, the witnesses are limited to their opinions on matters of science and skill alone, or to matters about which the jury and ordinary men are not informed. To permit opinion or expert evidence on these matters as well as on the ultimate question of negligence or no negligence, would of course usurp the province of the jury.

No systems of medicine are upheld and none are prohibited by the law. The Missouri statute, like that of many other states, prevents the board from discriminating against the graduates from the schools of the different systems of medicine,

provided they are legally chartered institutions in good standing (R. S. Mo., 1909, Sec. 8313). Although the regular system of medicine, aided by research and experience, has been advancing as a science for centuries, still the law regards it with no partiality. It does not require a man to accomplish more than he undertakes, nor in a different manner from what he professes; but on the part of all medical practitioners the law implies an undertaking that they will use ordinary care and skill and that they will respond for injuries to their patients caused by their carelessness or unskilfulness. Nor does the law allow a defendant in such a suit to insist on the proof of his want of care by members of his own particular school or system, but on the issue of negligence the reputable members of any school are allowed to give their opinions as to the proper or improper diagnosis and treatment administered (*Grainger vs. Still*, 187 Mo., 197).

It may not be deemed unprofitable to consider briefly a few of the English and American cases which illustrate the above propositions. In an early English case (*Rex v. Williamson*, 3 Carr & P., 635) the defendant was prosecuted for manslaughter for the death of Ann Delacroix at the Parish of St. James. The deceased was delivered of a male child on Friday and on the Sunday following the defendant undertook to remove by force the prolapsed uterus, thinking it was the remaining part of the placenta. In doing so he tore asunder the mesenteric artery, which caused the death of the patient. The evidence was conflicting on the question of the defendant's skill and negligence and his defense was that he had acted according to his best judgment. The trial was at the Old Bailey, in 1807, and in summing up the evidence to the jury Lord Ellenborough, C.J., said:

"It does not appear that there was any want of attention on the defendant's part and from the evidence of the witnesses on his behalf it appears that he had delivered many women at different times and from this he must have had some degree of skill . . . and if you find the defendant guilty it will tend to encompass a most important and anxious profession with such dangers as would deter reflecting men from entering into it."

This, of course, was a criminal prosecution; the court was not used then to damage suits for death from negligence and the court was concerned about the interests of the profession, even if the defendant were acquitted for his fearful want of skill. This too careful judicial concern of this very able jurist for the profession's welfare would not be followed in the modern cases, but a more salutary principle would obtain.

In a recent Minnesota case (*Moratzky v. Wirth*, 67 Minn., 46; 69 N. W. Rep., 480) the fact, unexplained, that the defendant had failed to remove a part of the placenta while attending

a woman at childbirth, as a result of which she had blood poisoning, was held to justify a conclusion of negligence on the part of the physician.

In an early Pennsylvania case (*McCandless v. McWha*, 22 Harris, 261) the action was for damages for malpractice in the setting of the plaintiff's broken leg, the fracture having been below the knee. The trial court had charged the jury that

"The defendant was bound to bring to his aid the skill necessary for a surgeon to set the leg so as to make it straight and of equal length with the other, when healed; and if he did not, he was accountable in damages, just as a stonemason or bricklayer would be in building a wall of poor materials and the wall fell down, or if he built a chimney and it smoked, by reason of a want of skill in its construction."

Of course it is impossible to uphold such a proposition. In passing on this instruction, the Supreme Court of the state said:

"The implied contract of the surgeon is to use reasonable care to restore the fractured limb to its natural perfection: not to absolutely cure, but to use ordinary care to effect a cure. The fracture might be such a one that no skill known to man could restore the limb to its original straightness and length, or the patient might, by disregarding the surgeon's directions, impair the effect of the best conceived methods. He does not deal with insensate matter, like the stonemason or bricklayer, who can place his materials according to mathematical lines; but he has a suffering human being to heal, a nervous system to tranquilize and a will to regulate and control." The judgment was therefore reversed.

In *Haire v. Reese* (7 Phila., 138) the plaintiff had fallen from a platform on which he was painting, a distance of 28 feet, his body striking a fence in the fall. The plaintiff claimed that his thigh bone was fractured and that defendant had assured him it was not and had treated him as if there had been no fracture, as a result of which there was a considerable shortening of the leg. Dr. D. H. Agnew, the distinguished professor of operative surgery in the University of Pennsylvania, had been called in consultation and placing the patient in a recumbent position the parts were carefully manipulated, but no crepitation of the bones was discovered; the limbs were measured and the patient being placed in an upright position, the injured limb was moved backward and forward until Dr. Agnew was convinced that there was neither fracture nor dislocation. Some six months later the patient called on Dr. Agnew at his office and it was discovered then that the plaintiff's leg had shortened. The shortening dated from his use of crutches and he was advised to discard them and to wear a high-heeled shoe. All of the expert evidence in the case was to the effect that the

shortening of the limb may have resulted either from a fracture of the bone or from interstitial absorption of the femur. In charging the jury, Justice Thayer proceeded as follows:

"No presumption of the absence of proper skill arises from the mere fact that the patient does not recover, or that a complete cure is not effected. God forbid that the law should apply any rule so rigorous and unjust as that to the relation and responsibilities arising out of this noble and humane profession. The medical man undertakes to possess such knowledge and skill as are commonly possessed by educated physicians and to apply that skill and knowledge with due diligence and care for the benefit of the patient. If his performance comes up to that standard he has discharged his duty and is not responsible for the results. If you conscientiously come to the conclusion that the defendant was guilty of any negligence or want of ordinary care and diligence, resulting in injury to the plaintiff, of course you will not hesitate to say so by your verdict. But if, on the contrary, you come to the conclusion that the plaintiff's complaint is unfounded, then it concerns not only the interest of the parties in the present cause and the interest of public justice, but also the established medical fame of this city, that you put an end, as far as you can, to experiments by unjustifiable lawsuits against skilful, attentive and humane physicians."

It is needless to say the verdict was for the defendant.

In an early Connecticut case (*Landon v. Humphrey*, 9 Conn., 209) the action was for damages for alleged malpractice in vaccination. The defendant asked the trial court to instruct the jury that unless the plaintiff was injured as a result of the gross negligence of the defendant she could not recover. But the court charged the jury that if there was a want of ordinary care and skill on the defendant's part, directly contributing to the plaintiff's injury, she would be entitled to recover, and the verdict for the plaintiff was sustained in the Supreme Court.

In a Minnesota case it is held that a surgical operation by a physician on the body of his patient is unlawful where performed without the express or implied consent of the patient; and in the absence of such consent that there was no legal right to perform the operation (*Mahr v. Williams*, 95 Minn., 261).

But in a recent Michigan case, the fact that a boy was accompanied by his relatives to a distant city to be operated on for a tumor, and that they made the second trip, was held to excuse the surgeon, as this was held to show an implied consent of the boy's father to perform the operation, and the surgeon was held not liable for the boy's death from anesthetics, where he had taken due precautions before administering the drug, believing the condition of the patient was such



that he could safely take the anesthetic (Bakker v. Welsh, 144 Mich., 632).

In *Vanhooser v. Berghoff* (90 Mo., 481), a leading case in this state, damages were claimed for malpractice in failing to use proper appliances to hold the limb in place after a dislocation of the hip had been reduced. The defendant had used pulleys and the Jarvis adjuster to extend the limb so as to permit the head of the femur to snap into the socket. It was admitted that the diagnosis was correct and the use of the Jarvis adjuster proper, but the complaint was that no proper appliances were used to keep the hip in place. A verdict was had, on conflicting evidence in the trial court, which was reversed in the Supreme Court because of an error in the instructions.

In *Longan v. Weltmer* (180 Mo., 322) the defendant, who claimed to be a magnetic healer who healed by a power which he alone possessed, had treated the plaintiff for derangement of the stomach by placing the plaintiff on her back on a padded table and placing one hand on her stomach and the other on her knees and bending them back against her breast until she could stand the pain no longer, and then turning her on her stomach and placing one hand on the small of her back and the other under her legs and pulling them back until she screamed with pain. He permanently injured her spine and pelvic organs, and the verdict for \$7,500 was upheld by the Supreme Court. During the trial the defendant objected to the opinions of physicians of the allopathic school, because he did not belong to any school of medicine, but the Supreme Court held their opinions competent as to the character of his treatment, regardless of the school that any of the witnesses belonged to.

In *Graigner v. Still* (187 Mo., 191) an osteopath had permanently injured the hip of a child seven years old by treating her for a dislocated hip when she did not have hip dislocation at all. He, too, objected to the testimony on the part of regular physicians, because they did not belong to his school of medicine, but the Supreme Court held that regular practitioners were competent to give their opinions as to the correctness of a diagnosis and the treatment of hip disease by an osteopath; the trial court was held to have erred in taking the cause from the jury; the plaintiff was held to have established a case for damages and the case was remanded for a new trial.

Instances of the application of these principles could be multiplied, but without avail. The legislation of the various states; the high standards exacted by the medical schools; the exalted ideals of your professional associations and the wonderful strides made in medicine and surgery the past few years, have had a tendency to minimize this class of litigation. The profession should be as slow to assist a negligent or ignorant physician as it is quick to assist a reputable physician of

skill and experience in this class of cases. The basis of the right to recover against the physician is his own wrongful act or omission and without this wrong there is no corresponding right. The law in such cases is based on sound principles of public policy and right reason, for nothing is law that is not reason (Coke, 24).

## THE PATHOLOGY OF EXOPHTHALMIC GOITER

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The general conception of exophthalmic goiter to-day is that it is a condition due to an increased production and absorption of thyroid secretion. This material apparently has a selective irritative action on the nervous system so that certain

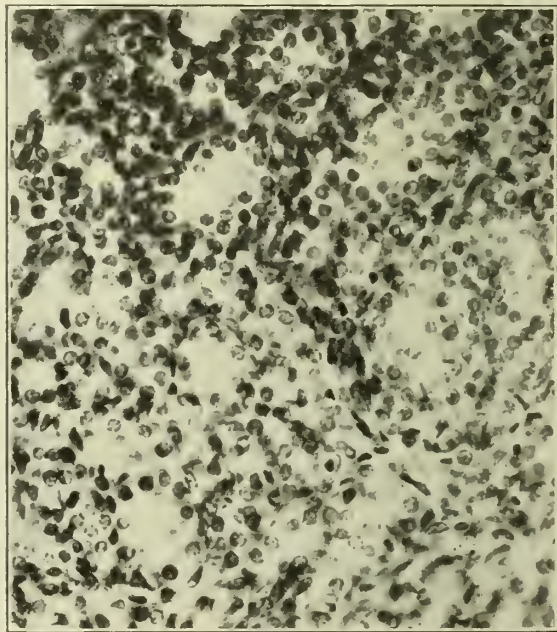


FIG. 1.—Thyroid, moderately severe exophthalmic goiter. Increased number of alveoli and great irregularity of proliferated alveolar epithelium.

characteristic symptoms, such as tremor, tachycardia and exophthalmos, arise as a result. The thyroid gland stands in such close functional relation with other organs of internal secretion, namely the thymus, hypophysis, suprarenal and genital glands, that the interdependent action of these organs must be taken into consideration in a study of diseases of any one of them. For instance, while the etiology of exophthalmic goiter is exceedingly obscure, the disease is not infrequently found in connection with functional changes in the genital glands, especially of the female, and in connection with the status lymphaticus.

Outside of the thyroid gland itself certain fairly constant pathologic changes may be

observed in this disease. The skin is thin, soft, smooth and moist. The heart shows hypertrophy in the majority of cases and in some instances also dilatation of the left ventricle. There is

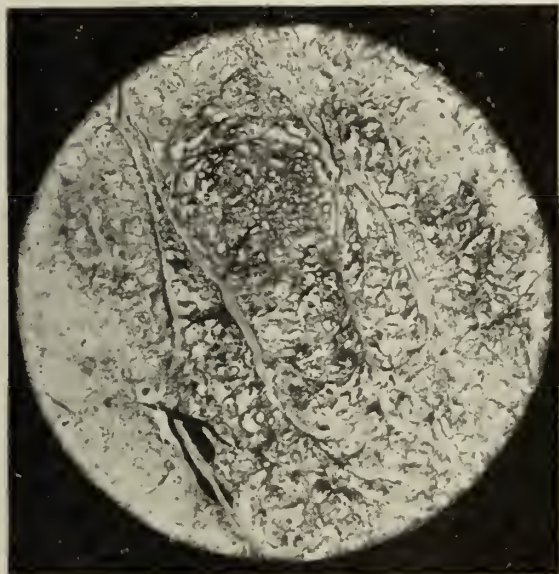


Fig. 2.—Thyroid, severe case of exophthalmic goiter. Marked epithelial proliferation. Very little thin, faintly staining colloid.

fatty degeneration and brown pigmentation of the myocardium. Enlarged thymus, as well as hyperplasia of lymphoid tissue elsewhere in the body, is not infrequently observed. This

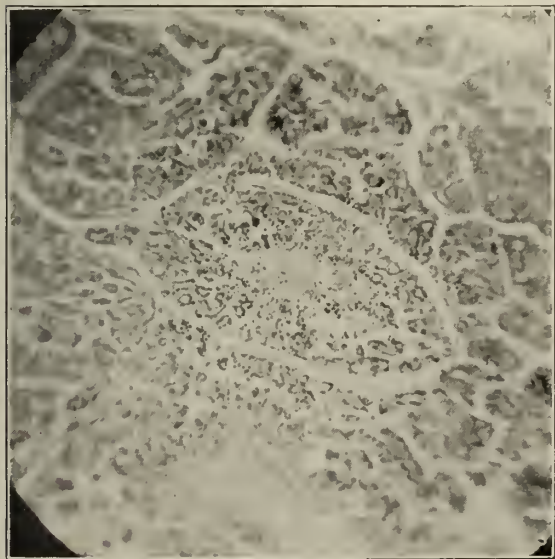


Fig. 3.—Thyroid, showing degeneration in exophthalmic goiter. The alveolar epithelium has proliferated until, from overcrowding of the cells, necrosis is taking place in the center of the acini. Practically no colloid present.

lymphoid hyperplasia may appear even in the thyroid gland itself. Hypertrophy of the thymus has been urged as a contra-indication to strumec-

tomy. Ninety-five per cent. of cases reported by Capelle that died during operation showed this condition and Gierke states that cases of exophthalmic goiter with enlarged thymus are usually worse after operation than they were before.

Exophthalmos is undoubtedly a sign of increased irritability of the sympathetic system. Protrusion of the eyes is caused by the contraction of certain fibers of Mueller's muscle, which has a sympathetic nerve supply. Tachycardia is also considered to be a sign of sympathetic irritation. While the blood-picture is not characteristic in this disease, lymphocytosis and increase of eosinophils are sometimes observed. Inconstant changes are found in the central nervous system and other organs. Widespread fatty degeneration of the skeletal muscles is a quite constant finding in this disease.

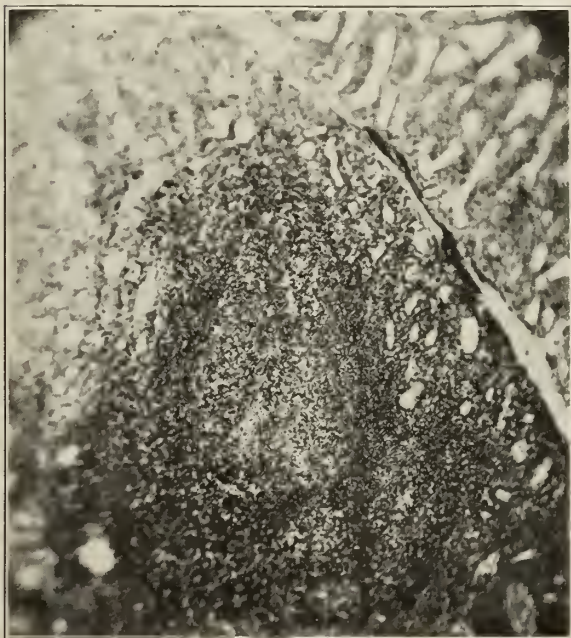


Fig. 4.—Section of thyroid gland showing intraglandular growth of lymphoid tissue in a case of exophthalmic goiter.

The thyroid gland itself in the acute cases is usually increased in size, although it is not necessarily always enlarged. It is firm in consistence and usually presents a glairy surface on section in the acute stage, granular or dry in the early cases. The gland is usually decidedly hyperemic. Microscopically the progress of the disease is marked by proliferation, hypersecretion and degeneration.

Proliferation, which consists of an increase of functioning cells within the alveoli of the gland, may be brought about as a cellular increase in a single layer, or there may be a reduplication of layers, or there may be papillæ formation within the alveoli or unfolding of the alveolar wall. There are also certain cases (adenoma type) which show an actual increase in the number of



alveoli. Hypersecretion is shown by the presence of a considerable amount of thin, non-eosin-staining secretion.

The degenerative changes, which are seen in individuals in which there is considerable remission of previously severe symptoms, consists in denser staining of the secretion, which is thick and non-absorbable and flattening, exfoliation and necrosis of the alveolar epithelium. This degeneration may be sufficient to destroy completely the parenchyma of the gland and still the symptoms of exophthalmic goiter may persist as a result of the previous intoxication. It is needless to state that the removal of such a gland is entirely unnecessary. In very old cases increase of the connective tissue stroma, sclerosis of blood-vessels, hemorrhagic cysts and various other degenerations are found.

That the pathologic findings in the thyroid gland in this disease coincide very closely with the clinical symptoms has been shown by L. B. Wilson. In 80 per cent. of 294 cases which he examined he was able to draw a remarkable parallel between the pathologic finding in the thyroid gland and the condition of the patient. This parallel will not always hold true, however, as the patient's ability to neutralize the increased secretion has to be taken into account.

The important thing to remember in considering the pathology of this disease is that the thyroid changes are not constant, but are at first progressive and then degenerative and that through these retrogressive changes the disease has a tendency to self-limitation, even if not interfered with.

I am indebted to Dr. D. L. Harris for the photomicrographs which accompany this article.

St. Louis University School of Medicine.

#### OBSTRUCTIONS OF THE UPPER URINARY TRACT \*

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The wisdom of the committee in dividing the subject of urinary tract obstructions into three portions is almost self-evident to those at all familiar with this branch of surgery, so vast is its scope and so important are its details.

Assuming that the above unqualified title was to comprise in detail its related etiology, anatomopathology, symptomatology and therapeutics, the writer soon assured himself that such comprehensive treatment would be out of question, lest one transgress the rule of time allotment, when so many interesting subjects are to be presented for your consideration.

I will, therefore, content myself with a synoptical if not elementary presentation of the

question, trusting to the discussion for its amplification and completion.

The causes for these obstructions may reside in the kidney or its pelvis; in the ureter anywhere in its course or in parts adjacent; at its terminus at or just within the bladder ostium; or in this vicinity dependent on pathologic states within the bony pelvis or its contained organs.

Formerly content with the customary diagnosis of a retention cyst under the term of a hydronephrosis or pyonephrosis, few attempts were made to seek an etiologic motif. Greater clinical experience, increased pathologic knowledge and above all increased facilities for diagnosis have compelled us to admit the importance of all the related etiologic factors as a *sine qua non* to a successful therapy.

Usually a pelvic calculus obstructing the upper ureteric ostium, whether intermittently or permanently, completely or incompletely, or an excessive accumulation of urinary sand playing a similar rôle, or finally a papilloma, benign or malignant, occluding the entrance to the ureteric canal embraced all the possibilities of obstruction residing in the kidney itself. To this I would add renal thrombosis, either in the larger vessels or distributed in the smaller peripheral branches, for the reason that a simulating symptomatology sometimes arises. Strictly speaking, however, this addition to the previously mentioned causes is incorrect but several personal experiences to be mentioned later when referring to the symptomatology of the subject under discussion have prompted me to call attention to this to avoid confusion.

Congenital or acquired displacements of the kidney perhaps assume a more important position among the causes of an upper urinary obstruction than those previously mentioned.

The more fixed position of the ureter below the hilus where it is attached to the posterior peritoneum permits the upper and more mobile portion to follow the excursions of the kidney during its descent or rotation. The vascular attachments, too, are fixed points about which the kidney and upper ureter may revolve to produce the obstructive effects now to be described.

As the kidney descends the pelvo-ureteric orifice no longer remains at the most dependent portion of the pelvis, but is placed somewhat above. Thus there is produced a pouch of greater or lesser extent depending on the chronicity of the affection and diminishing elasticity of the pelvis burdened with a residual urine. During the nocturnal decubitus owing to position and a partially retained pelvic elasticity the sac may still empty itself. Finally, unequal to the task, this may proceed silently for years until a complete occlusion through pressure atrophy converts the kidney into an hydronephrotic pouch.

\* Read at the Fifty-Fourth Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.

Usually the decensus is accompanied by a rotary movement owing to the fixity of the renal vessels. This rotation may be on a sagittal or longitudinal axis. The upper pole descends downward and backward, the lower upward and inward toward the median line, should the vertebral bodies offer resistance posteriorly. The ureter following the course of the enlarged pelvis describes a curve about its posterior wall, thus increasing the obstruction. Later on, owing to repeated congestions in the walls of the adjacent pelvis and ureter either bridge-like connective tissue lamellæ may form, occluding the latter's lumen as the sac fills with residual excretion; or complete adhesions form, converting the opposing walls into a spur and in the progress of time a veritable valve due to a thinning of this septum at its periphery. Finally the arterial branch supplying the lower pole of the kidney may before reaching its destination further kink the ureter as the one passes over and the other under it. Pathologists and clinicians have sufficiently often described the latter condition to call our attention to its importance.

It is alleged that a congenital nephroptosis discloses its etiology by a relatively long and serpentine ureter. Of the correctness of this view I have no doubt, having seen several notable instances, the kidney lying either in the pelvis or at the sacro-iliac synchondrosis. The further claim that they are usually left-sided was not borne out by my experience.

That displacements due to scoliosis are always left-sided is readily conceivable. The convexity of the vertebral column in the lower thoracic and lumbar regions presenting to the left, the kidney, owing to want of space, is crowded out of its niche. This region is further encroached on by the lower ribs, their position being changed by the spinal torsion. I have not had any experience with cases of obstruction in which scoliotic changes could be accepted as an assignable cause. That such an etiology exists, however, is sufficiently obvious.

Proceeding along the ureteric route intra as well as extrinsic factors producing complete or incomplete blocking of the channel are frequently observed.

Thus a calculus or calculi, displaying the same occlusive effect as they do when still in the kidney pelvis, may become fixed anywhere in the ureter up to the point of vesical entrance. A stricture—often following stone trauma—practically produces the same effect. Occlusions partial or complete, the accidental result of surgical trauma, are quite common. Clamps or ligatures applied during the performance of partial or pan hysterectomies by the upper or lower route, are frequent accidents.

The pressure of pelvic or abdominal growths may operate similarly and as effectively destroy the excretory function of a kidney or kidneys

unless relieved by timely surgery. Before modern surgery stepped in to postpone the evil day cervical carcinomata occluding one or both ureters were of frequent occurrence. In recent years I seldom witness these terminal phenomena.

Parametric adhesions are occasionally contributing factors and it has been my fortune to encounter a number of such cases. The relief of these obstructions is extremely difficult and I have been compelled to sacrifice the kidney to secure it.

Even a procedentia by its dragging on and flattening the ureters has been an acknowledged source of trouble.

Finally, whether owing to direct pressure or some dynamic or reflex inhibitory reason, relatively small ovarian cysts have produced simulating syndromes, confusing the practitioner. I recall an instance where a previously recognized but painless right-sided abdominal tumor suddenly became painful with symptoms of a gradually increasing oliguria, where the attendant with some reason made a diagnosis of hydronephrosis due to a sudden blocking of the ureter by a calculus. The patient was passing less than an ounce of urine daily when I saw her. A careful review of the case supplemented by a thorough examination caused me to reverse the previous diagnosis and declare for an ovarian growth with torsion of the pedicle. This proved true on section, which, owing to the patient's precarious condition, was done under local anesthesia, despite which, however, the suppression became complete producing uremic symptoms from which she finally made an excellent recovery.

As is well known the effect of a ureteric occlusion, particularly if complete, is a dilatation proximal to the point of interference. Though the retained but altered urine may remain aseptic for a time it has been my experience, and especially when due to stone, that a secondary infection soon follows.

It is well to make a distinction between those infections that are primary and those that are secondary. A primary pyonephrosis means for reasons that are obvious a collection of abscesses oftentimes completely separated and when still in communication with one another or with the pelvis by such narrow orifices that surgical drainage by a nephrotomy becomes impossible. Per contra a secondary infected hydronephrosis usually means a single sac.

I need only refer to the alternating occlusions and patency of the canal occasioned by the passing of inspissated pus and calcareous debris during the progress of a pyonephrosis, or blood-clots due to renal or ureteric growths, stone or parasites. The symptoms following complete obstruction of the upper urinary tract have many features in common though differing widely in their pathology. Thus the so-called renal colic



is often as intense and enduring whether due to a stone, blood-clot, inspissated pus *débris*, parasites or a sudden closing of an intermittent hydronephrosis. The chills, fever, nausea and vomiting of varying degree are just as common to one form of obstruction as to another.

Thanks to the history and clinical course a differential diagnosis is generally possible, especially if aided by physical means and the modern methods of precision.

Whether the obstruction be due to a stone in the pelvis or ureter, and I have had an abundance of experience with both, I am inclined to the view that an acute hydronephrosis and the sudden raising of the intrarenal tension is the cause of the colic. Where, however, this raising of the tension is due to the sudden conversion of an intermittent into a complete hydronephrosis in the absence of stone, we have some valuable data which if sought for will, I am quite sure, establish a differential.

Palpation, though usually painful generally does not reveal an enlarged kidney when the colic is due to stone. An occlusion due to a twist in the pedicle of a mobile kidney and especially a complete blocking of an incomplete hydronephrosis brings the sac into palpable recognition. The most important distinguishing diagnostic feature is the constant presence of blood-cells or their shadows during the intervals of the attacks when due to calculi and their absence shortly after the subsidence of an attack where stone does not stand in a causative relationship. It is well nevertheless to remember that sometimes occlusions due to torsions of the pedicle follow so frequently on one another that this valuable differential is not available.

Occlusion due to the engorgement of papillary growths at the pelvic ostium indicate the probability of their presence. A hematuria which has been more or less profuse and continuous suddenly ceases during a violent renal crisis with an equally sudden appearance of a fluctuating tumor in the renal region of the affected side. After the attack the latter disappears and the hemorrhage returns.

A clinical phenomenon common to upper urinary tract obstruction, whatever its exciting cause, is oliguria and at times anuria. There is an abundance of evidence showing that the renorenal reflex is operative in inhibiting the urinary excretion from the presumably sound kidney.

I have already indicated that certain diseased states of other viscera may produce perplexing phenomena simulating occlusion of the upper urinary tract.

Thrombosis of the renal vessels with anuria as the principal symptom presented itself a few days following the common open operation of excision of the redundant veins of a varicocele. In this instance to convince myself of this I did a nephrotomy.

Before attempting to find the cause of the upper urinary tract obstruction when in the presence of these symptoms and history the other viscera should be thought of and interrogated. Gall-stone attacks may at times be confusing and a cyst may sometimes form when the occlusion is at the cystic duct. Position and palpation will *a priori* exclude the kidney and the microscope will do the rest. Pancreatic cysts must also be excluded when accompanied by colics.

Generally speaking one physical sign will differentiate ovarian cysts from an hydronephrosis, whether low in the pelvis or lying high, and that is tympany over the tumor, if it be retroperitoneal.

Now as to the physical means of arriving: one of the most brilliant and satisfactory additions to modern surgery are our instruments of precision.

Above all the microscope is indispensable and its limitations are still fewer than those of the more specialized instruments.

Cystoscopy and ureteral catheterization are also indispensable, but those most familiar with their employment, unless carried away by their enthusiasm, are willing to concede an occasional limitation.

Who has not seen anomalies in the numbers of ureters, their irregular vesical implantation or bifurcations, spurs, valves and kinks with amputation at one or more points during the progress of a surgical intervention or post mortem?

May not these occasional exceptions interfere with that which has been achieved by the beautiful radiograms obtained after ureteral injections of the silver salts, painted and styletted catheters, etc.?

The capacity and tolerance of a kidney pelvis as demonstrated by ureteral instillations may also be negated by these abnormalities.

Despite the protests of the more expert radiographers and their alluring and Aladdin-like compressing diaphragms, obesity and clinical composition of the calculus are difficulties which they have not succeeded in entirely surmounting.

Who would be willing to abide the radiographer's decision in a threatening case of calculus anuria, especially if negative? Who would not rather be guided by the symptoms and history as to the side last involved and if necessary attack both sides to save his patient?

The great progress made in this branch of surgery is largely due to the enormously improved methods of mechanical diagnosis which, despite a few acknowledge limitations, has been the crowning glory of urogenital practice.

The argyria, formerly so common when the exhibition of silver salts was the vogue in the treatment of epilepsy and other nervous diseases, has suggested to the writer the possibility of their prompt decomposition along the urinary tract only when administered subcutaneously.

Perhaps some ingenious chemist may discover some method or new combination by which one of the urinary salts may exclusively produce this ideal effect—the silver tracery revealing exact conditions where certain well-known impedimenta limit mechanical access to the tract.

From what has gone before it is evident that an exact diagnosis suggests the method of removing the various obstructions described.

Briefly stated, if due to stone lithonephrotomy, pyelotomy, ureterotomy, each according to the indications, are accepted methods of relief. The want of time precludes a discussion of the preferred technics to accomplish extraction. The cystoscope, when feasible and especially when the obstruction is low, may aid in a bloodless extraction.

Nephroptosis, if complicated by unmistakable evidences of torsion, requires nephropexy for relief. Personally, I may be somewhat arbitrary in condemning this maneuver when appealed to to cure the nervous phenomena so common in this class of neurotics. An abundance of experience with my cases, as well as those of others, has proved it to be a delusion and a snare. I would employ it only when the clinical phenomena positively suggest obstruction.

A hydronephrotic kidney that is worth the saving may be restored by a variety of plastic devices intended to remove the cause or causes. Time will permit their mention only, the technic and indications being well known. Pyeloplication, ureteropyeloneostomy, ureteropyeloanastomosis, or even ureterocystoneostomy if necessitated by the conditions, may be employed to correct the evil.

All of these procedures, however, require puncture or incision drainage with a retention tube placed in the sac to relieve the proximal load during the healing process, which in time may restore the lost elasticity of the renal pelvis. It goes without saying that preliminary drainage of a similar character will be necessary to sidetrack infections before resorting to these plastics.

Strictures may and sometimes do yield to ureteral dilatations via the bladder by means of cystoscopy and where this fails by retro-ureteral catheterizations favored by a provisional nephrotomy. A ureteral retention catheter, although not free from the danger of infection, may accomplish the same result.

Freeing the ureter from adhesions in the parametric region may be insufficient to overcome the obstructions. Additional aids may be found where there is a badly damaged tube by resorting to resections and anastomoses after Van Hook, Bovee and others, to perfect the channel restoration. The same processes are to be employed for unyielding strictures anywhere in the ureter's course. To correct the faults produced by spurs and valves, excision with subsequent suturing is called for. The proper disposition of the latter not only maintains the patency of the new pelvo-

ureteric orifice but lowers its floor. In the course of the ureter after excision of similar obstructions proper suturing restores the continuity of the canal.

Vesical neoplasms at or near the ureteric orifice require resection and ureteral reimplantation.

Pelvic neoplasms and procedentia must be subjected to the customary surgical treatment when in causative relationship to the obstruction before relief can be secured.

Time or the want thereof, rather than the scope of the subject, prevents its further elaboration.

#### THE DIAGNOSIS OF HYPERTHYROIDISM\*

WILLIAM W. GRAVES, M.D.

ST. LOUIS, MO.

"A lady aged twenty became affected with some symptoms which were supposed to be hysterical. This occurred more than two years ago. Her health previously had been good. After she had been in this nervous state about three months, it was observed that her pulse had become singularly rapid. This rapidity existed without any apparent cause and was constant, the pulse being never under 120 and often much higher.

"She next complained of weakness on exertion and began to look pale and thin. Thus she continued for a year but during this time she materially lost ground on the whole, the rapidity of the heart's action having never ceased. It was now observed that the eyes assumed a singular appearance and the eye-balls were apparently enlarged, so that when she slept or tried to shut her eyes the lids were incapable of closing. When the eyes were open the white sclerotics could be seen to a breadth of several lines all round the cornea.

"In a few months, the action of the heart continuing with violence, a tumor of a horseshoe shape appeared on the front of the throat and exactly in the situation of the thyroid gland. This was at first soft but soon attained a greater hardness though still elastic. It was somewhat larger on the right than on the left. A circumstance well worthy of notice which may throw some light on the nature of the thyroid tumefaction is that from an early period of the disease a remarkable disproportion was found to exist between the beats of the radial and carotid arteries, the pulsations of the former being comparatively feeble while those of the latter were violent, causing a most evident throbbing of the neck and accompanied by a loud rustling sound. The tumor of the neck is subject to remarkable

\* Read in symposium at the Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



variations in size, sometimes diminishing nearly one-half."

That which I have just read is taken from the writings of one who was among the first to recognize the clinical course and the decided signs of a condition which was destined to perpetuate his name, the Dublin clinician, Robert J. Graves.<sup>1</sup> The syndrome so accurately described by Graves has had many valuable symptoms and signs added to it by subsequent observers. The underlying pathology of it has been accurately studied and its treatment in many cases made most satisfactory; but its early recognition, on which successful treatment so much depends, remains a stumbling block to the rank and file of the profession.

Doubtless, the multiplicity of symptoms and the undue importance attached to so-called cardinal signs in this condition bring confusion to the medical mind. All things being equal, a disease which is characterized by many symptoms and signs should be readily recognized. That this is not true of the condition under consideration is, in a measure, due: first, to the unfortunate name—exophthalmic goiter—by which it is frequently designated; and second, to the undue prominence given to the so-called cardinal signs—tachycardia, exophthalmos and goiter. So-called cardinal signs are, as a rule, late signs in the course of any disease.

In this connection I may remind you that locomotor ataxia is unusually slow of recognition by many physicians because such a term is descriptive of only one of its signs and that, too, one of the last to appear. There was a time in the history of medicine when so-called cardinal signs were useful in diagnosis, but that time is long past. For him who seeks to recognize the earliest manifestations of disease, such signs are utilized in diagnosis merely to make the clinical picture more complete. It can easily be shown that not one of the so-called cardinal signs of the condition under consideration is pathognomonic and that not any two of these, to the exclusion of other signs, are essential to its recognition.

Just as long as we continue to think of this condition as exophthalmic goiter many medical minds will refuse to recognize it in the absence of either exophthalmos or goiter or both. When we think of it as Graves' disease or Basedow's disease, the symptomatic triad—tachycardia, exophthalmos and goiter—immediately come to the mind to the exclusion of other signs. Hence it is that a proper nomenclature will be helpful in the early recognition of this condition.

Our present-day conceptions of this condition are founded largely on the studies of Moebius and from his work and the work of others the term hyperthyroidism, which aptly characterizes the condition, has been evolved. We shall have

made a distinct advance toward the early recognition of the syndrome we are now considering when medical men think and write of it under the term "hyperthyroidism."

C. H. Mayo<sup>2</sup> has recently emphasized the importance of this terminology when he says: "We use the term hyperthyroidism because we believe it will come into general use in describing a condition which manifests such varied symptoms and it is probable that then earlier relief will be given to many who are now treated for heart disease, nervous disease, gastric crises and intestinal toxemia until a projecting eye-ball or goiter become sufficiently prominent to attach the label, Parry's disease, Graves' disease, Basedow's disease or exophthalmic goiter."

A faulty terminology and undue prominence given to decided symptoms, while important, are not the fundamental sources of error in the early recognition of hyperthyroidism.

Sir William Jenner has said, "More mistakes are made in diagnosis, many more, by not looking than by not knowing." This aphorism is as true to-day, even more so, than in the day it was written. Hyperthyroidism has a rich symptomatology. Most of its signs and symptoms are known to the average medical mind but this same mind knows too many of them and "looks" too little for them. An accurate diagnosis is never an easy task. Early diagnosis is always difficult. But this will be less difficult for him who is willing—who will take the time—to look and who in his investigation will consider the whole individual and not simply one particular part of him.

By the whole individual I mean his *family history*, his *personal history* in its medical, social, habit, occupational and environmental aspects, the *history of his present trouble*, and lastly, a *searching physical examination*. It is the blending of these elements in varying proportions that makes up the sum total we call the individual—our patient.

Since no two individuals are alike in any particular, we should expect to find the course of development and the manifestations of disease different in certain particulars in each case. Therefore, if we would recognize disease in its earliest beginning, we must bring to bear in our study of each individual every incident at our command that will enable us to know all that can be known about him. We must study him as a whole by giving due consideration to every part that enters into his make-up.

It would, indeed, be an unpardonable trespass on the time and patience of this Association, neither productive of good nor discussion, for me to consider here, even briefly, the symptoms and physical signs of hyperthyroidism. Believing as I do that not diagnosis but early diagnosis is productive of the greatest good to the patient, to the physician and to the profession, and that

1. Clinical Lectures on the Practice of Medicine, 1848, ii, p. 223.

2. Surgery, Gynecology and Obstetrics, 1909, viii, 237.

early diagnosis is possible only by an intensive study of the whole individual, as just defined, let me direct your attention to a few points which may help us in our endeavor to recognize hyperthyroidism in its earliest manifestations.

1. While it is generally believed that *family history* is of little importance in this disease, the careful development of it, if it does no more, will assist the examiner in getting an insight into the mental state of his patient. The family history, as ordinarily elicited, gives us, as a rule, but little definite information in most conditions. But, if in our investigations of disease we will supplement the history by personally making comparative studies of individuals of families, by comparing one child with another and each in turn with his parents, valuable information will be thus secured in not a few conditions and especially in syphilis, tuberculosis and hyperthyroidism.

I have made some observations in this direction in families where one or more of their members presented symptoms of hyperthyroidism and have been frequently impressed by the general deviating characteristics of the progeny when compared with the parents.

Furthermore, my observations have shown that in many instances the brothers and sisters of individuals suffering from hyperthyroidism show simple enlargement of the thyroid gland in varying degrees. This fact has been occasionally noted by others, particularly in localities where goiter is endemic, but my observations indicate that comparative studies of individuals of families will show the great frequency of enlargement of the thyroid gland in the same generation of those suffering from hyperthyroidism.

A recent study of a family of five children, where the fourth child, a lad of 16, presented symptoms and signs of hyperthyroidism which had long been overlooked, showed that the others had distinctly visible and palpable thyroids in varying degrees of enlargement and that not one of the children compared favorably with either parent in physical development. Such studies are important because they may enable us to recognize predisposition to hyperthyroidism in some families and thus assist in early diagnosis and in prevention.

2. Remembering the great frequency with which we find exhausting diseases, grief, anxiety, worry, overwork, prolonged periods of stress and strain in the histories of patients suffering from hyperthyroidism, careful inquiry should be made regarding these. If we are patient in developing the personal history in its medical, social, habit, occupational and environmental aspects, no fact in personal history bearing on the case before us is likely to be overlooked.

3. The patient's account of his present trouble should be given most careful consideration. One should elicit the order of the development of his symptoms and inquiry should be made concerning their constancy. We should remember that patients are not always explicit about their complaints and as a rule only the most prominent symptom is mentioned. A study of the literature of the symptomatology of hyperthyroidism finds unanimity as to this, that in the earliest manifestations of the disease the patient rarely complains of more than one thing.

From my case records I could cite many instances where an individual suffering from hyperthyroidism had been treated for months and some for years for neurasthenia, hysteria, nervous prostration, gastro-intestinal neurosis, functional heart disturbance, nervous heart, etc. These patients had complained to their physicians only of their most prominent symptom and the underlying cause of the trouble had been wholly overlooked. A point which is not sufficiently recognized is the inconstancy of this one symptom or the variability in its intensity.

My studies in the early manifestations of hyperthyroidism show that the symptoms complained of are characterized by inconstancy and variability.

In this connection I may remind you of the inconstancy in the beginning of hyperthyroidism of respiratory distress, of palpitation, of tachycardia, of sweating, of diarrhea, and when the condition is fully established, of the variability in most of the subjective symptoms as indicated by good and bad days. Failure to appreciate the monosymptomatic characteristic and the variability of subjective symptoms of hyperthyroidism in its early stages are decided factors in preventing its recognition.

Such an error arises only when a part and not the whole of the individual is considered or when a diagnosis is based solely on the complaints of the patient. Let me now call your attention to a point which is probably the cause of more failures in the early recognition of hyperthyroidism than any other: the bad medical habit of calling nervous states hysteric or neurasthenic without developing a history and with only a cursory physical examination or more often none at all.

A patient may have decided tachycardia and be wholly unconscious of it. He may have distinct enlargement of the thyroid and not be aware of it, but he will hardly have any manifestation of hyperthyroidism whatsoever and fail to note the change in his nervous and mental state. This change noted by the patient—easily discernible by the physician—is the ever present, though variable, symptom and sign of hyperthyroidism from its earliest inception to the very end.

A consideration of the whole individual as here defined will not fail to show a physical founda-



tion in the vast majority of nervous and mental states commonly classified as hysteria, neurasthenia, nervous prostration, etc., and, in not a few of these cases, other symptoms and the physical findings of hyperthyroidism will be thus disclosed.

In the case quoted from the writings of Robert J. Graves the "lady became affected with some symptoms which were supposed to be hysterical, and after she had been in this nervous state about three months it was observed that her pulse had become singularly rapid."

A case recently reported by J. G. Munford<sup>3</sup> illustrates so well the prominence of nervous and mental symptoms in the beginning of hyperthyroidism that I abstract it here:

A vigorous young woman, aged 32, of active habits, mother of four children, with negative family and personal histories, two years before she was seen by Munford became suddenly extremely nervous. Within a week she took on symptoms which suggested to her physician a rapid neurotic breakdown. She became sleepless, fretful, irritable and almost impossible to live with.

After the surprising development of these symptoms enlargement of the thyroid gland was noted. There was no other evidence of hyperthyroidism with the exception of this and her nervous and mental state. The diagnosis of hyperthyroidism in this case was founded solely on the nervousness and rapidly enlarging thyroid. Without stopping to employ drugs and without waiting to see the development of the case, an operation was performed at once, removing the whole left lobe of the thyroid.

The patient promptly recovered from the operation, regaining her normal health. Her nervousness disappeared and her usual cheerful and equable temperament was restored to her. After a year her symptoms of hyperthyroidism gradually returned and became more settled and pronounced than before. Not only did her nervous and mental state return but she developed many of the classical symptoms of the condition, such as tachycardia, palpitation, dyspnea, exophthalmus, rapid emaciation. She was again operated on about a year after the recurrence of the symptoms, but, despite every precaution, died with symptoms of acute hyperthyroidism.

Not only does this case and the case quoted from Graves illustrate the prominence of nervous symptoms in the beginning of hyperthyroidism but also the point before mentioned that so-called cardinal signs are late signs in the development of the disease.

4. Whatever data we may gather from family history or from the more definite comparative study of the individuals of families; whatever data we may accumulate from the account of the

personal history of the individual; however explicit the statements concerning his symptoms and the order of their development may be, a proper judgment of the nature of the trouble cannot be formulated without a physical examination.

To become aware of disharmonies in physical development so often found in patients suffering from hyperthyroidism: for estimation of the general nutritional state and the condition of the viscera; to fully appreciate tremor and cardiovascular and respiratory phenomena; to note the condition of the skin about the trunk and extremities, particularly as to moisture and pigmentation; to better determine the size and character of the thyroid with the attendant thrill or pulsations, as well as the abnormal pulsation in carotids, facials, temporals and abdominal aorta, the parts must be freed from all clothing and the examination conducted in a quiet room and in good and equal illumination.

These matters are self-evident and my insistence on them may bring upon me the reproach of pedantry. But the early recognition of hyperthyroidism, or any other condition for that matter, can be accomplished only by carrying out detail and order in our investigations. The profession has too long considered the diagnosis of hyperthyroidism an easy matter; and, indeed, it is not difficult in its later manifestations. However, since histories of well marked cases of hyperthyroidism will show, almost without exception, that those symptoms and signs which have been considered essential in its diagnosis are late signs in the course of the development of the disease, we must recognize the necessity of making the diagnosis before most of them develop or in spite of them; and this can only be accomplished by carrying out detail and order in our physical examinations as well as in the other essentials in diagnosis.

A consideration of all that has gone before seems to indicate that the early diagnosis of hyperthyroidism will be aided:

First, by the medical mind discarding such terminology as Parry's disease, Graves' disease, Basedow's disease and exophthalmic goiter and substituting in discussion and in print the more natural term, hyperthyroidism.

Second, by remembering that so-called cardinal signs are usually late signs in the development of hyperthyroidism.

Third, by remembering that in the beginning of hyperthyroidism its manifestations are apt to be monosymptomatic and during this period the symptomatology is characterized by inconstancy and variability.

Fourth, by remembering that a change in the nervous and mental state is the ever present symptom and sign of hyperthyroidism; that this is frequently the only complaint in the beginning and that a more intensive study of the whole

<sup>3</sup>. Boston Medical and Surgical Journal, 1910, clxiii, p. 532.

individual supposed to be suffering from so-called hysteria or neurasthenia will frequently disclose other symptoms and signs of hyperthyroidism.

Fifth, by remembering that the fundamental source of error in the recognition of hyperthyroidism is rather in not looking than in not knowing.

### THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITER \*

WILLARD BARTLETT, M.D.

ST. LOUIS, MO.

The more familiar one becomes with this disease, the more convinced he becomes of the need of radical treatment of some sort in many instances. According to Dock, the first case very adequately described, that of Caleb Hillier Parry seen in 1786, led rapidly to a fatal termination. One of my own most recent experiences with this malady calls attention emphatically to the danger to which patients are often exposed. I cannot do better than quote in full a letter recently received:

Moberly, Mo., April 28, 1911.

Dear Doctor Bartlett:—

The lady of whom I wrote you, died suddenly Sunday night. There was no heart complication that I could detect, excepting a tachycardia.

Yours very truly,

C. K. DUTTON.

One is frequently deceived for a time as to the outlook in this disease. The patients present violent symptoms too well known to need further mention here, and then in consequence of some form of treatment, or without treatment at all, gradually improve in an astonishing manner. Such a patient may remain comparatively well for a longer or shorter period, and then to the surprise of those in attendance rapidly decline and eventually die. I know of no disease which presents greater contrasts or more frequently baffles our power of explanation.

As an example of this I will describe a case seen with Dr. I. W. Powell about four years ago. She was a woman of middle age, who had all the well-known symptoms of this disease very plainly marked. Her lower extremities were swollen and she was so weak that she could hardly walk. I advised preliminary treatment and operation if she should improve enough to risk it. This was refused. Three years later I heard to my astonishment that she was in perfect health, though nothing had been done. A few weeks ago I learned that all of her old symptoms have returned, although no one knows why, and that she is now at the point of death. The above three instances are perhaps enough to call our attention vividly to the fact that one so afflicted may have all sorts of ups and downs and fre-

quently die with or without what has been termed conservative treatment. On the other hand, it seems pretty well established that a certain number of such patients may outlive the disease, and after passing through the worst stages of it a hypothyroidism be evolved accompanied with myxedema. When, however, it is considered that degenerative changes in heart, brain and other tissues sufficient to kill the patient take place in consequence of hyperthyroidism, it is manifestly unwise to hope that a spontaneous cure will ever occur in a large per cent. of such patients. Surely our ideas of treatment will never be greatly modified by this knowledge. We have not at our command anything in the form of therapy which definitely and immediately cures every case of this kind. The best we can do is to minimize the dangers of the malady that the patient will escape lethal complication until such a time as she shall have outgrown the disease. It is claimed by Kocher, by C. H. Mayo, and by all surgeons who have had the widest experience in this matter that interference which decreases the amount of thyroid secretion offers us more than any other procedure which we now have at our command. I do not believe that any man whose opinion is worth having will claim more than this and the claim is based on a knowledge of very many hundreds such cases. I trust that the last word in this particular has not been said and that eventually the army of workers like Rogers, Beebe and Marine may make surgical operations unnecessary incidents in the treatment of this subject. An experience of 45 thyroidectomies in Graves' disease prompts a few suggestions as to the surgical treatment, especially of patients who are or who can be made fair operative risks.

Kocher, in view of his enormous experience in this line of work, has always held a local anesthetic to be far less dangerous than one of general nature. I have followed this example and have done practically all of my work in this way. At the last meeting of the American Medical Association, Crile showed us in a most interesting paper that undoubted brain tissue degenerative changes take place in consequence of prolonged hyperthyroidism. When this is coupled with the universal knowledge that ether and chloroform produce marked degenerations in various parenchymatous tissues it seems nothing more or less than a simple process of logic to avoid combining the two in the same individual. I am perfectly well aware that surgeons of experience do not all side with Kocher in doing this sort of work under a local anesthetic. I believe the conditions which surround the operator do, as Mayo says, in many instances determine this choice; however, I am sure of this much, namely, that any man who compares the two methods in an impartial way as I have done must be driven to the choice of a local anesthetic provided only he is willing to take pains to carry out a technic

\* Read in symposium at the Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



which is vastly more exacting than that called for when ether or chloroform is used. It is a simple matter to strap down the ordinary patient who is under the influence of a general anesthetic and remove a portion of the thyroid gland. But here a large number of details must be considered fully. The tissues must be handled with the utmost delicacy and the work carried on with all the celerity which is compatible with surgical finish, if a local anesthetic has to be employed.

I shall now take up in detail points which my own experience has taught me are of greatest value. As a matter of course these are highly nervous and sensitive individuals. They come to the operating room on high tension and are naturally responsive to every stimulus, hence it will be found of the greatest value to use a narcotic shortly before the patient is taken from her bed. I have usually employed morphin, although this has the great disadvantage that it tends to check secretions, which is undesirable in this connection. Chloral is hard on the normal heart and is consequently not to be used in patients where cardiac degenerative changes are so frequent: the same argument obtains to a much less extent so far as the bromids are concerned and not at all in connection with veronal. It has been suggested to me by Dr. Jackson of the Washington University Medical School that urethane would probably be an ideal drug in this connection, although I have not yet made use of it, but I expect to do so.

Our operations are invariably done on a table which has the patient's neck at its high point and slopes both toward the feet and head. This has two objects, viz.: the thyroid is best exposed in this way, and the amount of blood in the cervical veins greatly decreased.

The ordinary method of strapping the patient to the table is not at all applicable here. She must be prevented from slipping off to be sure, but this is to be done by allowing the feet, perineum and axillæ to come in contact with padded supports. The arms and legs must of course be confined, but if they are too tightly held the patient will complain of more discomfort from this than from anything else connected with the operation.

Under no circumstances must the patient's face be covered. One of the most common complaints has been a feeling of suffocation, and this is not to be completely avoided in an operation which involves the trachea. Covering the mouth and nose, however, adds markedly to the suffering from this source. A sterile cloth can be very easily erected in such a manner that the field of operation cannot be contaminated by the patient's mouth or nose, or be in the range of her vision.

With an ordinary antitoxin syringe holding about 20 c.c., I inject 1 per cent. beta-eucain just beneath the skin in the line of the intended incision. No anesthetic is used in any instance after the incision is made. We have been taught by

Kocher that the deep tissues of the neck are not highly sensitive, and while this varies with the individual, still I am convinced that there is something in it if the veins are excepted.

I have long been in the habit of using something akin to hypnotism with these individuals. A description of this is not easy to put on paper, but I think all those who have observed our work at St. Anthony's Hospital have noted that the operation is not undertaken until the patient's attention has been very definitely fixed by the operator. In most cases where this can be done the attention can be held and the individual so controlled for a few minutes. Of course a lengthy operation will tire out such a patient and then control is sure to be lost. It has not taken more than from seven to fifteen minutes for the removal of any goiter in our recent experiences, and during such a short period practically every patient can be very well controlled. The ligation of blood-vessels and the wound closure are naturally much less wearing on the subject than are the earlier steps of the procedure.

Of my operations for this disease, forty-five were partial thyroidectomies. Two of these patients died, that is 4.44 per cent. I can vouch for thirty-two of them, that is 71.1 per cent. being in splendid condition at periods varying from a few weeks to seven years after the operation. I will not go further into this feature since it was considered very fully in an article on this subject by Dr. Glennon and myself in *THE JOURNAL of the Missouri State Medical Association*, under the date of February, 1911.

I do not advise thyroidectomy on advanced patients unless a preliminary hospital treatment, consisting of rest in bed, atropine and the application of ice to heart and throat alters the condition to the point that I consider them fair surgical risks. If they are properly chosen, an anesthetic is dispensed with, no blood is lost and no shock produced; surely very little is added to the inherent danger of the disease and in this way a vast amount is accomplished.

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KNOWING that a light, well-aired, clean, safe factory would not of itself insure healthy men, many employers have built and supplied houses for their workmen at low rents. Just as these employers failed to see that they could reach more people and secure more permanent results if they demanded that tenement laws and the sanitary code be enforced as well as the laws for the instruction of children in hygiene, so the employee has failed to see that he is a part of the public that passes laws and determines the efficiency of factory inspection. The enforcement of state legislation for working hours, proper water- and milk-supply, proper teaching of children, proper tenement conditions, efficient health administration is dependent on the interest and activity of the public, of which the working class is no small or unimportant part.—*Civics and Health.*

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

SEPTEMBER, 1911

### EDITORIALS

#### THE HOSPITAL SITUATION IN ST. LOUIS

There is a possibility that the eleemosynary institutions in St. Louis may receive a fairly reasonable amount of that attention from the city government which duty to the sick poor should dictate. We say there is a possibility of this extraordinary thing coming to pass for our optimism in this respect has been so often and so completely swept away in the past that we should be amazed, though none the less gratified, with such fruition.

The present hospital trouble in St. Louis has grown out of a fight between two factions of the reigning political party over an ordinance submitted by the hospital board to appropriate a considerable amount of money for salaries of physicians, nurses and attendants, and increase the number of these employees. On one side were the economists who declared the city did not have the money; on the other side the insurgents who favored the bill more because it afforded an opportunity to antagonize their own foes than because of any particular solicitude for the care of the sick. The climax came when an investigating committee of the House of Delegates visited the institutions to obtain first-hand knowledge of conditions. What this committee will report is not known at this writing, but enough was discovered to throw the newspapers into an epileptoid frenzy of delight over the quantity and quality of news matter obtained. That, though, is what newspapers are for and it is due to the daily publication of all phases of the situation that the people finally became aroused; which, as we said in the beginning, gives hope of a possibility of improvement in the conduct of these institutions.

The discussion of the situation provoked much sentimental twaddle about the duty of the city to its sick poor, many editorial effusions on humanity and, as usual under such circumstances, a rush for newspaper notoriety by irresponsible and ill-balanced, not to say disgruntled medical persons in criticism of everything that did not gibe with their own unripe notions of hospital management; but we read little of encouragement for the appropriation of an adequate fund to meet the necessities of these institutions. The

health of the people, however, has always suffered neglect when it was found necessary to expend money to preserve it.

The net result of the disclosures at this time is that the fiscal officers of the city declare there is no money to give the hospitals in spite of the statement of other officials that a million dollars lies unappropriated in the treasury. Therefore the buildings are screenless, the inmates are compelled to subsist on cornmeal mush and molasses, boiled beef, stewed peaches (dry ones) and soup, all eaten with a tin spoon from a tin plate; the city, it seems, cannot afford to furnish such expensive articles as knives and forks for its charity patients. The administration has absolutely refused the request of the hospital board for an increase in the appropriation for food or an adequate number of intelligent employees.

The physical condition of the institutions is excellent, especially of the city hospital and the new addition to the infirmary; the absence of an infectious disease hospital, however, is a constant menace.

The internal organization of the hospitals in St. Louis has always been bad; there has been, indeed, practically no organized control of employees. Under the present hospital system there has been a strong effort toward systematic control of employees which has had its best results among the physicians in the city hospital. Formerly there were frequent withdrawals of interns and numerous complaints, and even threats to strike, because of real or imagined wrong treatment; but under the present system there have been few withdrawals and even refusal to leave for well-paying positions because of the large opportunities for experience and intelligent application of knowledge under the direction of the visiting staff.

The hospitals in St. Louis need: a training school for nurses, or an adequate number of trained nurses from existing schools; trained and experienced dietitians; good cooks who know how to prepare palatable dishes in economical fashion; a system of inspection of supplies delivered at the institutions by one who knows whether they measure up to specifications, and who is not corruptible; ambulance surgeons. The niggardly policy of the present administration in St. Louis clutches the throat of the hospital board and nullifies every effort to give the sick and afflicted decent material and nursing attention.

The medical supervision of the patients is conceded to be far more efficient in every respect than that which prevailed under the old régime; but this does not cost the city any money because the services of the physicians on the visiting staff are given free. The visiting staff has demonstrated the superiority of that method of attention to the city's sick; it should be and it will be a permanent arrangement.



The hospital situation in St. Louis has always been a disgrace to that city and will continue to shame it until the parsimonious policy of its fiscal officers changes to permit an adequate allowance for the necessities of its eleemosynary institutions.

### NEW ATTACK ON DR. WILEY

The uncompromising opposition of Dr. Wiley, Chief of the Bureau of Chemistry, toward food and drug adulteration has brought many attacks on him from every possible angle by persons whose business interests were affected through impartial enforcement of the pure food and drug law. In addition to this kind of antagonism Dr. Wiley's superior officers in the Department of Agriculture have negatived many of his efforts to prosecute certain violators of the law. It is probable that no federal law passed in recent years has been so vigorously enforced or caused such consternation among the interests affected as the pure food and drug law; and this because Dr. Wiley was determined that the food and drug supplies to the people should be pure if enforcement of the statute could make them so.

The most recent attack on Dr. Wiley, for it can be called nothing less, comes from the Department of Agriculture to which the Bureau of Chemistry is subordinate, charging that Dr. Wiley employed an expert at a salary in excess of the maximum amount allowed under a law recently passed, notwithstanding the fact that the arrangement was submitted to his superiors and apparently had received their sanction. Later the action of Dr. Wiley was pronounced improper and the Attorney-General recommended that the President approve the dismissal of Dr. Wiley. This the President has not yet done and it will astonish the people of this country very greatly if he should permit the machinations of the enemies of pure food and drugs to win such a victory over the rights of the people and respect for the law.

The country has become aroused and the President's action in the matter is awaited with acute interest. The situation presents a fine opportunity for Mr. Taft further to strengthen the cause of pure food and drugs and the conservation of health by administering a scathing rebuke to the enemies of the nation's greatest asset—the health of the people.

### OPPOSITION TO HEALTH LAWS

The health commissioner of St. Louis recently scored the people of that city for their antagonism to the edicts issued by the health department demanding improved hygienic and sanitary conditions. "Whenever we condemn a nuisance," said the health commissioner, "the person

involved says 'all right, I'll go to the courts.' Whether he yields in the end there has been much delay and expense which an intelligent attitude by the masses would prevent."

The health commissioner is right. The people themselves are to blame for many of the illnesses and deaths from contagious and infectious diseases and until the people realize that no man has a right to place his fellow's life in jeopardy by neglect in controlling the spread of disease there will always be antagonism to the work of the health department.

The people need instruction concerning the causes that lead to the spread of disease and the means to prevent this spread; such knowledge this Association is endeavoring to impart; we cannot, however, reach the masses successfully without the cooperation of the newspapers of the state. Unfortunately this cooperation, with a few notable exceptions, has not yet been extended. More or less publicity is given through the newspapers to the existence of any particular malady that happens to be prevalent, if the subject has any news value, as for instance the recent scourge of rabies, but there has been little in the nature of encouragement in support of the orders of the health department. The most that is done, as a rule, is to publish the personal views of a few citizens of more or less prominence for and against the necessity of obeying the orders of the guardians of the public health, and let it go at that.

If the newspapers will take an interest in promulgating real information derived from authoritative sources, such as the health officers or this organization, concerning disease prevention and the conservation of health, and then add their own weighty voice to a demand that the people must protect themselves and their fellows in the manner directed, the masses would soon learn confidence in the precautionary measures. The newspapers would then come close to fulfilling one of their most sacred duties, namely, the spread of information concerning a topic of vital importance to the people, for nothing is so vitally important in every human endeavor as the health of the worker.

### THE LOS ANGELES SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The Los Angeles meeting of the American Medical Association was a most enjoyable one from every standpoint. The work of the scientific sections was fully up to the standard of the Association's annual gatherings, while the social features far exceeded in number and diversity anything ever attempted by previous hosts. Los Angeles, itself a garden spot, has many beautiful points of interest in close proximity and her people seemed determined that no visitor should

depart without a view of all; which, added to the many delightful social gatherings, made our stay "one continual round of pleasure." The trip across the plains was not unpleasant and the Missouri Special was filled with such jolly, congenial folk that the heat was forgotten in the pleasure and novelty of the trip.

The work of the House of Delegates proceeded with alacrity and directness of purpose. The most important legislative work concerned the effort to establish uniform regulation of membership whereby all members of county societies shall be *ipso facto* members of the state and national organizations. This subject will be presented to the state associations for their consideration as soon as the committee appointed to devise plans for the accomplishment of this object makes its report. The committee is composed of the following state association secretaries: Dr. E. W. Weis, Illinois; Dr. Joseph Martin, Louisiana; Dr. Thomas McDavitt, Minnesota; Dr. C. A. Thompson, Oklahoma; Dr. E. J. Goodwin, Missouri.

Quite an innovation in the propaganda of instruction to the people on health matters was inaugurated at this session when the ministers of Los Angeles gave their pulpits to members of the Association on the Sunday preceding the opening session of the meeting. Lectures were delivered by a large number of doctors on topics dealing with health conservation, hygiene and sanitation. It was a most encouraging aspect of the meeting to observe that the people attended these lectures in large numbers and the resultant good cannot be overestimated.

President Murphy's address was a forceful and eloquent presentation of the beneficent work of the organized medical profession in disseminating knowledge among the people for the conservation of health. He condemned the quack and the medical pervert — the commission giver, the fee divider and the professional witness — as a menace to any community that harbors these creatures and called on legislative bodies to enact strict legislation to crush such imposters.

The Association honored itself and conserved its dignity and prestige by electing to the high office of president the venerable and beloved Abraham Jacobi, of New York. Few men have been as active and resourceful in such a variety of departments of medical endeavor as has Dr. Jacobi. The honor is well bestowed and richly deserved. Dr. Alexander R. Craig, formerly of Philadelphia, but who has been acting as assistant to the secretary for several months, was elected secretary. Dr. Simmons retires from this office after eleven years of faithful service. The 1912 meeting will be held at Atlantic City.

All delegates from Missouri were present except Dr. McAlester of Kansas City, who was prevented from attending. His place was filled by Dr. J. Franklin Welch. Missouri was well

represented at the meeting, there being something over sixty members registered. In the selection of officers of sections the following St. Louis members were honored: Practice of Medicine, Dr. Roger S. Morris, secretary; Ophthalmology, Dr. Adolf Alt, chairman; Pathology and Physiology, Dr. Leo Loeb, chairman; Stomatology, Dr. Virgil Loeb, vice-chairman; Dermatology, Dr. Martin F. Engman, vice-chairman.

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## EDITORIAL NOTES

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### NOT ON AMERICAN MEDICAL COLLEGE FACULTY

Dr. Fred B. Hall of St. Louis wishes to state emphatically that the use of his name in the catalogue of the American Medical College, St. Louis, is not only without his consent but that he declined orally and over his signature to be associated in any way with this institution.

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### AN ERROR

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Our attention has been directed to a misstatement in the report of the Committee on Public Policy and Legislation, published in the August issue. This report stated that the Optometry bill was introduced by a member of the legislature from Kansas City. This was an error. The bill was introduced by Representative J. F. Barbee, of Saline county.

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THE following articles have been accepted by the Council for New and Nonofficial Remedies:

Cargentos Aseptic Vaginal Tampons (H. K. Mulford Co.).

Cargentos Dusting Powder (H. K. Mulford Co.).

Cargentos Ointment (H. K. Mulford Co.).

Cypress Oil (Schimmel & Co.).

Scarlet R Medicinal, Biebrich (Heilkraft Medical Co.).

Searlet R Salve (Heilkraft Medical Co.).

Calcium Peroxide (Roessler & Hasslacher Chemical Co.).

Magnesium Peroxide (Roessler & Hasslacher Chemical Co.).

Strontium Peroxide (Roessler & Hasslacher Chemical Co.).

Zinc Peroxide (Roessler & Hasslacher Chemical Co.).

G. H. Sherman Vaccines:

Colon Bacillus Vaccine 40,000,000.

Colon Bacillus Vaccine 100,000,000.

Gonococcus Vaccine 20,000,000.



Gonococcus Vaccine 100,000,000.

Mixed Vaccine containing Gonococcus Vaccine 100,000,000, *Staphylococcus albus* 40,000,000.

Pneumococcus Vaccine 40,000,000.

Pneumococcus Vaccine 100,000,000.

Mixed Vaccine containing Pneumococcus 30,000,000, *Streptococcus* 20,000,000.

*Staphylococcus Pyogenes Aureus* Vaccine 300,000,000.

*Staphylococcus Pyogenes Albus* Vaccine 300,000,000.

Mixed Vaccine containing *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, *Staphylococcus citreus*, each 100,000,000.

Mixed Vaccine containing *Staphylococcus pyogenes aureus*, *Staphylococcus albus*, each 200,000,000.

Mixed Vaccine containing *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, each 300,000,000.

Mixed Vaccine containing *Staphylococcus pyogenes albus* 400,000,000, *Staphylococcus pyogenes aureus* 200,000,000.

Mixed Vaccine containing *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, each 100,000,000.

*Streptococcus erysipelatis* Vaccine 20,000,000.

Mixed Vaccine containing *Streptococcus pyogenes* 30,000,000, colon bacillus 40,000,000.

Mixed Vaccine containing *Streptococcus pyogenes* 30,000,000, pneumococcus 40,000,000, *Staphylococcus pyogenes albus* 150,000,000.

Mixed Vaccine containing *Streptococcus pyogenes* 30,000,000, *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, each 100,000,000.

Mixed Vaccine containing *Streptococcus pyogenes* 30,000,000, *Micrococcus catarrhalis* 100,000,000.

*Streptococcus Pyogenes* Vaccine 60,000,000.

*Streptococcus Pyogenes* Vaccine, 30,000,000.

Mixed Vaccine containing *Streptococcus pyogenes* 60,000,000, *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, each 200,000,000.

Typhoid Bacillus Vaccine 50,000,000.

Typhoid Bacillus Vaccine 500,000,000.

Typhoid Bacillus Vaccine 1,000,000,000.

Acidol (Farbenfabriken of Elberfeld Co.).

Acidol Pepsin (Farbenfabriken of Elberfeld Co.).

Hormonal Intramuscular (Schering & Glatz).

Hormonal Intravenous (Schering & Glatz).

Supracapsulin Ointment (Cudahy Packing Co.).

The Council has reconsidered and withdrawn the acceptance of Iodone.

The Henry C. Blair Co. having advised the Council that their Iodone preparations had been turned over to Eli Lilly & Co., inquiry was made to Eli Lilly & Co., inquiring if they desired the continued inclusion of the Iodone preparations in

New and Nonofficial Remedies under their name. Eli Lilly & Co. having advised the Council that they did not desire such inclusion the Council voted to reconsider the acceptance of Iodone and the several Iodone preparations and to omit them from New and Nonofficial Remedies.

## CORRESPONDENCE

### OPHTHALMIC WORK IN EUROPE

(Letter from Dr. Woodruff)

If one wishes to see a large number of eye cases he can do so by visiting any of the large ophthalmic clinics in any of the large cities in the United States or in Europe.

In Paris a student from "the states" is welcomed and shown every courtesy and attention and is given an opportunity to see all that is to be seen. The professors are most delightful men and seem anxious that the student of ophthalmology should spend his time to advantage. The number of cases both operative and otherwise is great. At the Lariboissier Hospital an ideal clinic is conducted; each case of external trouble is subjected to a microscopic examination and careful diagnoses are made. Original work is done under the supervision of Morax. One particularly interesting experiment is that of preserving corneal tissue in rabbit serum and transplanting this preserved tissue after a lapse of two weeks. Where this tissue is transplanted a perfectly clear cornea has resulted. At Galezowski's clinic one may well spend time and if desirous of working, opportunity will be given him. At the Clinique Vingt hospital there is a wealth of operative material and one may see operative work being done hour after hour. The operations are varied in kind and in methods adopted, all claiming good results.

To visit Professor Landolt is a treat which no one should miss. It is necessary to present one's card between the hours of 12 and 12:30 on certain days of the week and a student from the United States may be assured of a cordial welcome from this nestor in ophthalmology.

A knowledge of French is necessary if one wishes to work in Paris, but for one who wishes to see what is being done a knowledge of the language is desirable but not essential, for the leading men speak English and will do so for the benefit of those who do not understand French.

At the Royal London Ophthalmic Hospital (Moorfields), one may register and attend the clinics each morning. Here the general clinics for external eye diseases, operative cases and refraction cases are all attended to at the same hours. One may do as much refraction as he wishes and see as many other cases as he may desire. By prolonging one's stay in London he

may see not only a great number of cases but also a very great variety of the most interesting and rare conditions. There are many other interesting clinics to visit in London where one may spend his time to best advantage. Unlike the clinics at Vienna instruction is not given and one should have some knowledge of ophthalmology to make his stay most profitable.

At Vienna instruction is given but a commercial spirit pervades the atmosphere, so that one may see a greater variety of cases, both operative and otherwise, by first laying down his kronens. Here a knowledge of German is of advantage, but by no means essential, for an effort is made to attract the student from the United States.

In order to study ophthalmology it is not necessary, however, to go to Europe for in so doing one would overlook those splendid opportunities which are to be had in New York, Philadelphia and other places in our own country where work is as well done as it is in any of the places spoken of in this letter.

F. E. WOODRUFF, M.D.

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## NEWS NOTES

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THE American Medical Directory is being rapidly compiled and will be ready for distribution early in 1912.

DR. H. E. PEARSE and Dr. Edwin L. Miller, of Kansas City, announce the formation of a partnership with offices in the Rialto Building.

DR. E. W. RENTFRO, of Rayville, has gone to Boulder, Colo., in search of climatic conditions for the restoration of his health. He is now located at 736 Maxwell Ave., Boulder, Colo.

DR. G. T. MYERS, of Macks Creek, secretary of Camden County Medical Society, will deliver a series of lectures on hygiene and sanitation to the teachers and pupils in the public schools this winter.

THE Mississippi Valley Medical Association will hold its 37th annual session at Nashville, Tenn., October 17, 18 and 19. Dr. J. A. Wither-  
spoon, of Nashville, is chairman of Committee on Arrangements.

DR. C. D. SCOTT, formerly chief dispensary physician, at St. Louis, has recently resigned from his connection with the hospital department and is now associated with Dr. W. A. Hardaway in the practice of diseases of the skin, with offices in the Lister Building, St. Louis.

THE North Missouri Medical Association will meet at Moberly, October 19-20. Members desiring to read papers at this meeting are cordially invited to correspond with Dr. C. S. Wilson, secretary, Kirksville, Mo.

DR. A. H. MYERDICK has been appointed penitentiary physician. Dr. Myerdick is well equipped for the position as he has been a very efficient member of the hospital corps in St. Louis for several years. He is a member of the St. Louis Medical Society and the State Medical Association.

THE Medical Society of the City Hospital Alumni of St. Louis and the St. Clair (Ill.) County Medical Society held a joint meeting on September 6 at Priester's park near Belleville. The session continued during the afternoon and evening. Dinner was served at 6:30 o'clock, after which there was a dance.

THE school board of Carterville is contemplating establishing sanitary drinking fountains. There seems to be a general opinion in Carterville favoring the establishment of sanitary drinking fountains and it is hoped this will be done. The Carterville *Record* publishes a strong plea for the installation of these fountains.

IT is announced in the newspapers that the State University is contemplating the establishment of a full four years' course in medicine. According to the newspaper, Governor Hadley, President Hill of the University, and Senator Yeater a member of the board of curators, held a conference at Jefferson City to discuss the establishment of a complete medical department.

WE have information that a thriving city of two thousand population is in need of a physician. The surrounding territory is well inhabited and the people are in flourishing circumstances. There is an opportunity here for an energetic, well equipped, ethical practitioner to establish himself most favorably. For further information write the secretary of the State Association.

THE staffs of the Kansas City hospitals are making preparations to hold special clinics during the fall festivities centering around the visit of the city's guardian saints—The Priests of Pallas, October 2 to 8. Physicians visiting Kansas City during that period will have a splendid opportunity of seeing the work done in the hospitals and clinics which will make the visit to the city at that time especially attractive.



Dr. J. A. WATERMANN, formerly physician at the penitentiary, has been appointed superintendent of the hospital for the insane at Farmington, and Dr. W. S. Hinton of Farnfelt and Dr. J. A. Tiller of Bloomfield, were appointed assistant physicians to the same institution. The two assistant physicians are members of their county societies and the State Medical Association. Dr. Watermann is not affiliated with the organized medical profession but had the endorsement of Governor Hadley, according to newspaper reports.

"HEALTH—THE HUMAN FACTOR," is the title of a magazine issued by the Equitable Life Assurance Society for distribution among its policy holders. Through this medium the Equitable enters upon a campaign of conservation of health. The first number contains sixteen pages of miscellaneous information relating chiefly to methods of preserving health and a record of some of the methods in vogue to conserve health. The Equitable has also established a "Conservation Department" which will be in charge of Mr. E. E. Rittenhouse.

THE Missouri State Nurses' Association will meet in St. Louis, October 11, 12, 13 at the Planters Hotel. The association is composed of graduate nurses most of whom are also registered nurses. Miss S. S. Palmer, editor of the *American Journal of Nursing*, and Miss J. A. Delano, Chairman of the National Committee on Red Cross Nurse Service, will be present on the 12th and 13th and will address the association. Miss Margaret McKinley, of St. Louis, is president, Miss Esther Crouley, of St. Louis, secretary and Miss M. L. Freytag, of Graham, Mo., corresponding secretary.

## SOCIETY PROCEEDINGS

### CARROLL COUNTY MEDICAL SOCIETY

Carroll County Medical Society was reorganized recently and held its first regular meeting at Carrollton. It has been decided that monthly meetings will be held. Dr. R. F. Cook, of Carrollton, is president and Dr. H. J. Harrell, of Bogard, is secretary-treasurer of the society.

### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met at Harrisonville, August 3. Members present: Drs. H. A. Brierly, H. S. Crawford, H. Jerard, J. S. Triplett and W. K. Wright. The program consisted mostly of discussions of clinics.

Dr. Brierly reported a case of "Peliosis Rheumatica," and Dr. Triplett reported a case of "Erythema Nodosum." Both cases were of much interest and freely discussed by all members present.

The subject of "Whooping Cough" was taken up and informally discussed by all the members, and many points of interest were brought out.

Dr. R. P. Walker, of Belton, was elected to membership. It was decided that hereafter the regular meeting of the society should be held on the second Thursday of the month instead of the first Thursday, as heretofore.

H. S. CRAWFORD, M.D., Secretary.

### GASCONADE-OSAGE-MARIES COUNTY MEDICAL SOCIETY

On August 17 the Gasconade-Osage-Maries County Medical Society held its regular meeting in Rose Bud. The program, continuing through the afternoon and evening, was as follows:

Dr. F. Aufder Heide, Drake—Typhoid fever.

Dr. J. W. Burgess, Belle—Differential diagnosis, diphtheria and tonsillitis.

Dr. Buechler, Freeburg—Fractures and dislocations.

Dr. A. J. Crider, Meta—Suggestions in gynecology.

Dr. John Engelbrecht, Stony Hill—Tuberculous meningitis.

Dr. J. J. Ferrell, Owensville—Astigmatism.

Dr. J. A. Hanks, Koenig—Measles.

Dr. J. E. Jose, Vienna—Incarcerated hernia.

Dr. C. T. Leach, Feuersville—Rheumatism and its complications.

Dr. M. E. Spurgeon, Red Bird—Amebic dysentery.

Dr. John Underwood, High Gate—Cholelithiasis.

J. D. SEBA, M.D., Secretary.

### HOWELL COUNTY MEDICAL SOCIETY

The regular bi-monthly meeting of the Howell County Medical Society was held in the Pythian Hall in West Plains, August 24.

Vice-President A. H. Thornburgh presided and the following members were present: Dr. J. B. Cunningham, of Pomona; Dr. H. A. Thompson, of Leader; Dr. J. D. Evans, of Peace Valley, and Drs. J. C. B. Dixon, R. S. Spears, H. C. Shuttee, L. W. Wuesthoff, A. H. Thornburgh and James Elliott, of West Plains.

Dr. L. W. Wuesthoff, who recently came to this society from Crawford, Neb., was elected to membership and Dr. Thompson, of Lanton, was elected a member of the board of censors for three years.

The following essays were read:

"Endocarditis," Dr. Spears; "Dysentery," Dr. Cunningham; "Diagnosis of Diseases of the Stomach," Dr. Elliott.

Following the reading of the papers the society adjourned and went immediately into special session for the purpose of discussing the revision of fee bills. The revision was decided on and Drs. Evans, Shuttee and Rowe were appointed a committee to make the revision.

### RALLS COUNTY MEDICAL SOCIETY

The Ralls County Medical Society meeting was held July 20. There were twenty doctors present.

Papers were read and discussed with much interest, as follows:

"Practical Hygiene," Dr. H. C. Vaughn, Shelbina; "Some Problems in Sanitation," Dr. R. M. Wimm, Hannibal; "Schoolhouse Sanitation," Joe Burnett, New London; "Maternal Impressions," Dr. W. G. Hendrix, New London; "Cephalhematoma; What to Do With It," Dr. T. J. Downing, New London.

President Goodier, of Hannibal, was with us and favored us with an excellent paper.

Dr. J. D. Smith, of Shelbina, counselor of our district, was also present.

T. J. DOWNING, M.D., Secretary.

## BOOK REVIEWS

**THE PRACTICAL MEDICINE SERIES.** Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in Northwestern University Medical School. VOLUME IX. SKIN AND VENEREAL DISEASES. By W. M. Baum, M.D. Miscellaneous Topics by H. N. Moyer, M.D., \$1.25. The series of ten, \$10.00.

The present volume is one of a series of ten issued at about monthly intervals, and covering the entire field of medicine and surgery. Each volume is complete for the year prior to its publication on the subject of which it treats.

While the series is published primarily for the general practitioner, the arrangement in several volumes enables those interested in special subjects to buy only those parts they wish.

The chapters under Section I, for Vol. IX, are as follows: Constitutional Relations of the Dermatoses; Special Dermatoses; Therapy of the Dermatoses; Radiotherapy and Actinotherapy; Gonorrhea and Chancroid; Syphilis and Allied Diseases; Genito-Urinary Medicine and Surgery. Section II is: Medical Education and the History of Medicine; Darwinism and Medicine; Biography; Life Insurance; Medico-Legal; State Control of Medical Practice; Vivisection.

**TEXT-BOOK OF HYGIENE.** A comprehensive treatise on the principles and practice of preventive medicine from an American standpoint. By George H. Rohe, M.D., and Albert Robin, M.D. 8 vo. Fourth revised and enlarged edition, pp. 582. Philadelphia. F. A. Davis Co., 1908.

A splendid book on Hygiene; the arrangement of questions at the end of each chapter making it especially adaptable as a text-book for use in High Schools.

Hygiene is here considered in all its aspects through twenty chapters, and there remains very little to be said on the subject after this volume.

**TREATISE ON DISEASES OF THE SKIN FOR THE USE OF ADVANCED STUDENTS AND PRACTITIONERS.** By Henry W. Stelwagon, M.D., Ph.D. Professor of Dermatology in Jefferson Medical College, Philadelphia, etc., etc. Sixth edition, thoroughly revised. Pp. 1195; 289 Illustrations in the text, and 34 full-page colored half-tone plates. Philadelphia and London. W. B. Saunders Co., 1910. Cloth \$6.00 net.

The fact that this is the fifth edition of this work to come out in five years bespeaks its worth more pointedly than words.

In this latest edition are embodied changes that bring the issue up to the hour.

The chapter on Sporotrichosis is new; that on Pellagra has been rewritten, and the other features of the book that vie in interest and importance have been correspondingly treated.

As a Dermatology for the physician it occupies the very first place.

**THE EXPECTATION OF LIFE OF THE CONSUMPTIVE AFTER SANATORIUM TREATMENT.** By Noel Dean Bardswell, M.D., M.R.C.P., F.R.S. (Ed.). Medical Superintendent, King Edward VII. Sanatorium. 8 vo. Pp. 136. New York. Oxford University Press, 1910.

An attempt to statistically determine the curative value of sanatorium treatment. Those who are interested in this phase of the Tuberculosis question will find the data here set down full of suggestion. The classification deals in all manner of comparisons touching upon the after-history of the patient. The author calls attention, however, to the fact that nearly all of his patients were so situated as to have enjoyed the

benefits of comfortable homes, and generally pleasant circumstances in life, in distinction to the very poor, and the daily driven wage earner. This should be remembered when studying the book.

**SURGERY: ITS PRINCIPLES AND PRACTICE.** In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume V, Octavo of 1274 pages, with 550 illustrations 45 in colors. Philadelphia and London: W. B. Saunders Company, 1909. Per volume: Cloth, \$7.00 net; half morocco, \$8.00 net.

The fifth volume, the concluding one of this monumental series, sustains the reputation that the preceding four volumes have created. The personnel of its authors is the very highest, including such men as Armstrong, of McGill University; Hare, of Jefferson Medical College; Mayo, of St. Mary's; Ochsner, of Illinois State University; Warbasse, of New York, together with others of prominence and standing. Surgery should be congratulated upon the completion of this labor.

**DISLOCATIONS AND JOINT-FRACTURES.** By Frederic Jay Cotton, A.M., M.D., First Assistant Surgeon, Boston City Hospital. Octavo of 654 pages, 1201 original illustrations. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6.00 net; half morocco, \$7.50 net.

This book of Dr. Cotton's is full and comprehensive. It is written after a fashion not altogether conventional; one notes with relief the absence of the formidable array of annotations and references which has come to be regarded as the sine qua non of medical books, and the illustrations are so copious and illustrative that they leave little to be desired.

The volume is a decided success and fills a needed place.

**DISEASES OF THE EYE.** By George E. de Schweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania. Sixth edition revised. 8 vo. Pp. 945. Illust. Philadelphia and London. W. B. Saunders Co., 1910. Cloth \$5.00 net; half morocco \$6.50 net.

This edition has been largely rewritten, with the addition of numerous sections that bring it up to date, presenting the latest in Ophthalmology.

The book is as nearly complete as a book of the sort may be, and to be appreciated needs only to be known.

**A HANDBOOK OF PRACTICAL TREATMENT.** In three volumes, by many writers. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M.D., Assistant Professor of Medicine, University of Pennsylvania. Vol. I, 8 vo., pp. 909. Vol. II, 8 vo., pp. 865. Philadelphia and London. W. B. Saunders Co., 1911. Per volume, cloth, \$6.00 net. Half morocco, \$7.50 net.

Practical Treatment by Musser and Kelly is worthy of the highest confidence; it has been written by men eminent in their chosen fields and represents the newest and most authentic word in the various departments. Volume I treats of general principles—physical methods, intoxications, blood, lymphatics and ductless glands. Vol. II, diseases of the circulatory system; infectious diseases; tropical diseases and animal parasites. We await the appearance of the third volume with enthusiasm.

**THE PRACTICAL MEDICINE SERIES COMPRISING TEN VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY.** Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical



School. Vol. IV Gynecology. edited by E. C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and C. von Bachel, M.S., M.D., Assistant Professor of Obstetrics, Chicago Policlinic and College of Physicians and Surgeons; Gynecologist to the German Hospital, Chicago. Series 1911. Year Book Publishers, Chicago. This volume \$1.25; the series of ten \$10.00.

In this volume of 223 pages the editors have endeavored to give the work of the year in Gynecology. The book is divided into subheads as follows: General Principles; Infections and Allied Disorders; Malformations and Tumors; Traumatism; Displacements, and Disorders of Menstruation and Sterility.

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepf, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Visiting Physician to The Philadelphia General Hospital; Associate in Clinical Medicine, Jefferson Medical College. Second edition, thoroughly revised, 8 vo., cloth, pp. 715. Philadelphia & London. W. B. Saunders Co., 1911. \$4.00 net; half morocco \$5.50 net.

These questions are those which have been proposed by the state boards of the larger and more representative states during a period of years. A good idea can be obtained from the perusal of the volume of the nature and scope of such quizzes, and the book cannot but be of very material assistance in the time of need that arises upon such occasions.

HOSPITAL MANAGEMENT. A handbook for hospital trustees, superintendents, training-school principals, physicians and all who are actively engaged in promoting hospital work. Edited by Charlotte A. Aikens, formerly Superintendent of Columbia Hospital, Pittsburgh, and of the Iowa Methodist Hospital, Des Moines; late Director of Sibley Memorial Hospital, Washington, D. C.; Member of the American Hospital Association; Author of "Hospital Training-School Methods and the Head Nurse"; "Primary Studies for Nurses," etc., etc. 12mo. pp. 488. Illust. Philadelphia & London. W. B. Saunders Co., 1911. Cloth, \$3.00.

An excellent book on the subject practically covering the whole field by those who through first hand experience are able to discuss the matter intelligently and profitably. The volume takes up the mechanical, executive and legislative features of hospital management, and commends itself to superintendents and directors of hospitals.

A TEXTBOOK OF MEDICAL DIAGNOSIS. By James M. Anders, M.D., Ph.D., LL.D. Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College of Philadelphia; Officier de l'Instruction Publique, etc., etc., and L. Napoleon Boston, A.M., M.D. Adjunct Professor of Medicine, Medico-Chirurgical College; Physician to the Philadelphia General Hospital; Pathologist to the Frankfort Hospital. Cloth pp. 615. Svo. 418 illustrations. Plates. Philadelphia & London. W. B. Saunders Co., 1911. \$3.00 net.

A book in which are combined the various methods of clinical, laboratory and physical diagnosis; the purpose of the authors being to furnish a method by which the clinical features of the various diseases may be determined by collecting the symptoms in stated cases, and of showing the significance of correlating symptoms with the structural changes upon which they depend. To put it broadly, the history of the disease is studied in conjunction with the history of the patient.

We notice one unique feature in the book; the gait of patients suffering from certain nervous diseases is shown by means of what is termed "moving pictures"; but this cannot be very satisfactory as the result

depends of course upon the eye and the imagination of the student. Technic is demonstrated by liberal photographs and plates.

The basic idea upon which the book is written is excellent, although in some instances the idea is not continued to its logical conclusion.

ONE HUNDRED SURGICAL PROBLEMS. The experiences of daily practice dissected and explained. By James G. Mumford, M.D. Visiting Surgeon to the Massachusetts General Hospital; Instructor in Surgery, Harvard Medical School; Fellow of the American Surgical Association, etc., etc. Svo. cloth. pp. 354. Boston. W. M. Leonard. 1911.

An interesting book of one hundred surgical cases illustrating some problem in treatment or diagnosis, selected at random from the experience of several years. The nature of these cases is general, and embraces situations widely varied in character.

While there is nothing startling about the volume its serviceableness will be instantly appreciated, the very commonplaceness of the examples given being a strong recommendation to the general practitioner or surgeon and to the medical student during the last year of his college work.

HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. A manual of psychotherapy, designed especially for the general practitioner of medicine and surgery. By Henry S. Munro, M.D. Third edition, revised and enlarged. Svo. pp. 409. St. Louis. C. V. Mosby Co. 1911.

The volume is interesting, and the style engaging. The vein of the volume is, however, too optimistic (a fault that seems to be inseparable from these books on psycho-therapeutics), although an unprejudiced and sincerely intelligent perusal of the book will be profitable.

As we read this work of Dr. Munro it seemed to us that the opportunity for abuse is greater than the opportunity for use, and considering the uncertain education of the masses, the broad application of suggestion and hypnotism advocated in this book is likely to be attended by grave menacing possibilities. The book is very attractively bound, and the typography of the volume is faultless.

PERSONAL HYGIENE AND PHYSICAL TRAINING FOR WOMEN. By Anna M. Galbraith, M.D. Member the New York County and State and the American Medical Associations; Fellow of the New York Academy of Medicine; ex-president of the Alumni Association, Woman's Medical College of Pennsylvania; former Attending Physician, Neurological Department, of the New York Orthopedic Hospital and Dispensary; late Attending Physician and Instructor in Diagnosis and Clinical Medicine at the Woman's Medical College, New York Infirmary. Author of "The Four Epochs of Woman's Life," etc., etc. 8 vo. pp. 371. Philadelphia & London. W. B. Saunders Co. 1911.

A clear and precise presentation of the fundamental physiological laws as they affect women.

The nine chapters in the book cover the subject well; the treatise is far from being exhaustive, that not being the object of the volume. For every-day hygiene for women it meets all requirements.

THE PRACTICAL MEDICINE SERIES, COMPRISING TEN VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY. VOL. V. OBSTETRICS. Edited by Joseph B. De Lee, A.M., M.D. Professor of Obstetrics, Northwestern University Medical School. With the collaboration of Herbert M. Stowe, M.D. 8 vo. pp. 233. illust. The Year Book Publishers, Chicago. Series 1911. This volume \$1.25; the series of ten volumes \$10.00.

This volume on Obstetrics is divided into the following major heads: Pregnancy; Labor; The Puerperium, and The New Born.

**VAGINAL CELIOTOMY.** By S. Wyllis Bandler, M.D. Fellow of the American Association of Obstetricians and Gynecologists; Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital; Associate Attending Gynecologist to the Beth Israel Hospital, New York City. Large octavo. 148 original illustrations. pp. 450. Philadelphia & London. W. B. Saunders Co. 1911. \$5.00 net.

A most comprehensive work on vaginal operations. The liberal illustrations and the lucidity of the descriptions leave little to be desired. The great advantages possessed by the vaginal route over the abdominal route in specific instances are here vividly set forth. The technic is carefully presented.

The divisions of the work are as follows: Posterior Vaginal Celiotomy; Anterior Vaginal Celiotomy; Simple Vaginal Hysterectomy; Disease of the Adnexa; Hysterectomy; Myomectomy; Hysteromyomectomy; Vaginal Cesarean Section.

**A PRACTICAL TREATISE ON OPHTHALMOLOGY.** By L. Webster Fox, M.D., LL.D. Professor of Ophthalmology in the Medico-Chirurgical College; Ophthalmic Surgeon in the Medico-Chirurgical Hospital, Philadelphia. Pa.; Member of the Army Reserve Medical Corps, etc. 8 vo. pp. 807. Ill. New York & London. D. Appleton & Co. 1910.

The book is comprehensive and up to date, containing the best of what has been done in this department of medicine in late years.

Special attention has been paid to the bacteriology of the eye; the relation of general diseases to those of the eye has also been considered. The recent theories regarding color perception and color blindness are presented, and full particulars of the latest reliable therapeutic methods in ophthalmology are given.

The chapters treating of ocular muscle imbalance and errors of refraction are sufficiently comprehensive to enable the student and the general practitioner to become proficient in this work.

There are six colored plates and three hundred illustrations. The volume is pleasingly gotten up and attractively bound.

**THE ANATOMIC HISTOLOGICAL PROCESSES OF BRIGHT'S DISEASE.** By Horst Oertel, M.D., Director of the Russell Sage Institute of Pathology, New York. 8 vo. cloth. pp. 227. illust. W. B. Saunders Co., Philadelphia & London, 1910. \$5.00 net.

In this collection of Lectures which were delivered in the Russell Sage Institute of Pathology, City Hospital, New York, during the winters of 1908 and 1909, the author purposes not so much to give a mere statement of facts as to emphasize relative values, and from them reconstruct the whole as a unit of interwoven processes. The author criticizes the text-book conventionalities of the present day, with which the student has to contend, and these lectures are in themselves a corrective suggestion along those lines.

These lectures on the morphology of nephritis are five in number, and are followed by an appendix, notes and references.

The work occupies a place of its own in medical literature.

**PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URINARY BLADDER.** By Paul M. Pilcher, A.M., M.D. Consulting Surgeon to The Eastern Long Island Hospital; Late Surgeon to the German, Seney and Samaritan Hospitals of Brooklyn, N. Y., etc., etc. 8 vo. cloth. pp. 398. illust. W. B. Saunders Co. Philadelphia & London. 1911. \$5.50, net.

Cystoscopy has grown in importance during the last few years until to-day a working knowledge of the

technic is almost a *sine qua non* with the general practitioner. For accuracy in diagnosis of diseases of kidney and bladder the cystoscopic procedure is the only way; it has also its therapeutic value in these cases.

In this volume by Pilcher the indications concurrent with the various situations are given, and the technic is carefully detailed. Numerous cuts, many of them in colors, add greatly to the practical efficiency of the book.

Nothing that has not been tested or observed by the author is found in the work. Dr. Pilcher is a surgeon of wide experience and such a book coming from his hand is sure to be accorded the recognition that it deserves.

The book is attractively bound and well printed.

**A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION.** By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathaniel Bowditch Potter, M.D., Assistant Professor of Clinical Medicine at Columbia University (College of Physicians and Surgeons), New York; Visiting Physician to the New York City Hospital, to the French Hospital, and to the Hospital for Ruptured and Crippled. Second edition, revised. Authorized translation from the fifth revised, and enlarged German edition. 8 vo. cloth. pp. 1229. Illustrated. Plates. Philadelphia & London. W. B. Saunders Co. 1911. \$6.50 net.

The second edition of the fifth German edition is some three hundred pages larger than the first translation. The cuts have been increased from 291 to 389, with two additional plates.

The chapters upon icterus, and hemodynamics have been rewritten. Those on sphygmography; examination of the intestines; urine examination; examination of the nervous system, and exploratory punctures, have been greatly enlarged, with revisions in other sections on a corresponding scale.

The author observes that the book is not a mere compilation, but that the greater part of its contents are the fruit of his personal experience and has not appeared in any journal, owing to insufficient time. He discusses the Roentgen ray from the standpoint of his own personal experience.

## BOOKS RECEIVED

**A MANUAL OF PRACTICAL HYGIENE.** For Students, Physicians and Health Officers, by Charles Harrington, M.D., late Professor of Hygiene in the Medical School of Harvard University. Fourth edition, revised and enlarged by Mark W. Richardson, M.D., Secretary to State Board of Health of Massachusetts. Octavo, 850 pages, with 124 engravings and 12 full-page plates, in colors and monochrome. Cloth. \$4.50, net. Lea & Febiger, Philadelphia and New York, 1911.

**A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS.** For Students, Hospital Physicians and Practitioners. By Charles E. Simon, M.D., Professor of Clinical Pathology and Experimental Medicine in the College of Physicians and Surgeons, Baltimore. Seventh edition, enlarged and thoroughly revised. Octavo, 780 pages, with 168 engravings and 25 plates. Cloth. \$5.00 net. Lea & Febiger, Philadelphia and New York, 1911.

**HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE.** A manual of practical psychotherapy, designed especially for the general practitioner of medicine and surgery. By Henry S. Munro, M.D. Third edition revised and enlarged. 8 vo. cloth. Pp. 409. St. Louis, C. V. Mosby Co., 1911.



# **CATALOGUE ST. LOUIS MEDICAL LIBRARY** **3525 Pine Street**

(Continued from page 96)

- Ibid.—A Treatise on Fractures. J. B. Lippincott & Co., Philadelphia, 1859.
- Manley, Thomas H.—Local Anesthetics. J. H. Chambers, St. Louis, 1894.
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(To be continued)

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### ORIGINAL ARTICLES

#### OUR RURAL SCHOOLS\*

E. H. MILLER, M.D.

LIBERTY, MO.

It would be an easy task to write an essay on some national medical issue and after rehashing the current literature of the present, as to accepted views on the same, give my views on the subject, based on thirty-five years of practical experience at the bedside under any and all conditions. It would be easy to find some interesting prevalent disease and attempt to dissect the accepted conclusion on the history, pathology, symptoms and treatment, and in return be dissected myself.

It would be easy to urge you and indelibly impress on your minds the necessity of more vigorous methods of stamping out tuberculosis, and all the terrible fatal diseases that decimate our state each decade. Yet this would be only a repetition of oft told tales, and I would not blame you, should you rise in a body and leave me "alone in my glory." But I have in my mind's eye a subject as old as the hills, yet as new as the first flowers in the springtime. A subject unlike most monogram subjects which affect only a few each year in a community, create no stir and are soon forgotten until some case in the future tells us there is such a disease to be dreaded. A subject that knocks at our door in the springtime, climbs into our laps in the summer's sunny hours, burrows into our breasts in the golden days of autumn and breaks our hearts in the wintertime of our lives. Do you guess what it is? Do you dream what it can be, interesting as it is to us all? Don't you know what it must be, lurking as it does in the home of the humble; casting its baneful influence in the cabin of poverty, as well as rushing in swift

and certain strides in the mansions of the wealthy? Old age with infirmities is to be pitied. You can thank them for the good they have done in this world for home, state or nation. You can, as physicians, treat them expectantly through the downhill of their lives and ease their tottering footsteps to the grave. But what more?

Already in the horizon of the present medical age, I see a star rising that only can solve the burning question of to-day. What made his footsteps totter so early to the grave? What made the lamp of his life begin to ebb and flow ere the heyday of youth had barely bloomed into manhood? What dimmed his eye, furrowed his cheek and whitened his head ere the prime of life had been shadowed by the noon-day sun? 'Tis these questions we would try and answer to-day.

When we look into our mixed audiences of business men and women of to-day, as medical men, we heave a sigh, and sigh again, until gazing outside we see the laughing, rollicking, romping, teasing, fretting, stewing, dreaming, hoping boys and girls—the hope of the nation, the future fields of health in our beloved land. Waiting for the introducing in the springtime of life, "The Seed of Life."

Oh! 'tis Youth that melts the icebergs that chill the harbors of every nation. 'Tis Youth that makes the gulf stream that warms the barren cold shores, and melts away the rough and uneven shore line that surrounds us. It is Youth that fills the gaps in the great army as they fall in the battle for existence, and to them we must look and look only for safety.

So let us follow this fellow and maiden and see how we guard them and who is failing in his duty or is to be praised if their lives are successful as a whole. Yes; 'tis an old hackneyed subject, but bear with me till I dress it up, then see if you recognize it. You and I, country practitioners, listen: I often visit my city friends and we talk of their lives and mine, of their homes and mine, of their schools and mine; and when I tell them of our beautiful country roads and

\* Oration on Medicine, read at the Fifty-Fourth Annual Meeting Missouri State Medical Association, Kansas City, May 16, 1911.



paint the landscape in nature's most beautiful colors, when each running brook murmurs sweet music in the springtime, and the grassy fields of summer, with the golden autumnal harvest, all tending to drive away the horrors of winter, he sighs for all these blessings; and as his children rush in and play in the hall or bedroom or street, he tells me, "he would love to live and raise and school his children in a country with an air as pure as the sunlight from heaven; a country with water as pure as if it had been drawn from the fountain of health." Poor, unfortunate man—let us see if he knows what he is talking about. So I have taken for my subject

#### OUR RURAL SCHOOLS

Our rural schools! The bulwarks of our nation. The foundation of our newer patriotism. The headwaters of the River of Physical Freedom. The home of our children, beyond our parental control for five days out of each week. With its six hours each day and eight months out of each year, and that too at an age when muscle, nerve and gray matter are forming, whether the soil for its nourishment is teeming with good rich blood material, or whether the foundation ingredients are foul and impure. Can't you see the end of it all? Either a high school boy or girl, with head erect and face aglow and eyes bright as the fire-flies in the evening, ready for the fight for higher knowledge; or a pallid complexion, a stooped shoulder, a dim eye and softened muscle. Bright, intellectually-speaking, for his or her age, but what of the struggle ahead.

I wish you to remember the essential elements that necessarily enter into the foundation of every life and as you interfere with these elements you prevent the perfect building of the being, whoever he or she may be.

These are, roughly or generally speaking without going into detail, air, light, water, food, and the properly giving and using and following of these to their proper destination, should be the aim of someone, should be under the control of somebody, who is or ought to be responsible for the lives and health of every boy and girl during the hours they are away from home. Now let's follow them. I am not dealing with some imaginary condition in some wild and out-of-the-way place in our state, but I am bringing before your gaze the school homes of the boys and girls of one of the grandest counties in the world; a county that has within its bounds one of the most renowned institutions of learning for both male and female in the west, and its professors are the best.

Nor am I telling you of the rural schools of our county as to their mental training and scholarly abilities. They are number one, as our state school superintendent will tell you, which makes it so much the worse. But I have a photograph of every rural school in my county, its name, its

foundation, the condition of the building, the toilets and how far away from the well or cistern, when the building was fumigated, when the well was cleaned, etc. The Missouri idea, "You will have to show me." is here and you need not take my word but see for yourself. These are far better than in many counties throughout the state.

We have sixty-six rural schoolhouses in my county and 5,200 children that have to attend them or go without an education. Of these buildings only thirteen have been fumigated this year, and only sixteen wells and cisterns have been cleaned; forty with foundations broken and with holes large enough to let in any animal that may choose to live and die there, and in proportion the undercurrent of air is foul and unwholesome.

Look at these and tell me who are responsible for this condition? We have a county superintendent, earnest, hardworking, keenly alive to the existing circumstances and the evils likely to follow, and he has helped a great deal to relieve the condition. But to whom must he go for aid, or who ought to look after these matters. Well, we will see.

One physician told me that our citizens were not properly educated as to the dangers of such violation of all health laws, and he would advise a series of lectures throughout the county and show the parents the danger to their children. Sounds good, but let me show you just one picture, one of many just like it, which will show you the utter folly of such talk. This schoolhouse has had more good lectures in it on temperance and the proper way to rear the young than any I know of. Its patrons are, many of them, college-bred and are wealthy, the best citizens of our state. This schoolhouse boasts of one of the best debating societies in any county. They discuss all the leading live subjects of the day, political, religious, scientific or social, and do so ably.

Yet when their schoolhouse burned a year or so ago they rebuilt it out of good material but totally void of all sanitary reasoning—with its well on its front porch, between the two entrance doors, with two buckets and pulley to draw the water and an open mouth to catch all the drippings. One among many. Yet you tell me to talk to them and educate them. If they would, they could educate me. Yet it is the same old indifferent story. Our board of health tells me all these matters are in the hands of the individual school boards, supposed to be the best citizens in the district. Earnest, hardworking property owners, ready to do everything to aid and advance the interest in their county. Active in trying to get the best county officers, yet in those vital questions let us see how they stand.

I was, a few years ago, president or chairman of the State School Board Association, and I am happy to say it died when I was its president, or

soon after. And why? I sent out several hundred letters to the school board members, rural especially, mapping out my ideas as to the duties of school boards to their school districts, and asked them to come to Jefferson City at the next annual teachers' meeting, of which our association was a part, and let us reason together for the common good.

In answer to these urgent appeals I had the pleasure of having seven out of the three thousand school board men of our state to attend that meeting. 'Twas then I advised our State Superintendent of Schools to cut off this useless caudal appendage from the educational ship of state out in mid-ocean, scrape these barnacles from the bottom of his vessel before he ever again anchored into another harbor to hold a state meeting. Leave them outside to battle with epidemics, sickness and disease without any leader or guide or anchor. Let them drift, and may God have pity on them when the shades of evening come, and they see a vacant chair near the hearth stone, caused by their own carelessness concerning the school-life of their little ones. So we must look somewhere else. The sphere is getting smaller and the leaders are few left to choose from to lead us out of difficulty.

No later than three weeks ago, this subject is of such burning importance in the Eastern states that Dr. Charles W. Eliot, former president of Harvard, was called on to give his ideas as to the best way to reach the end desired. Listen to what he says: "The medical profession of to-day has made a failure in assisting society in its progress to cleanliness and health. The school teachers must be the main factors in this mighty struggle and to them we must look for aid. There is only one other ally that must be their constant companion, that is preventive medicine. In other words, society must take hold of the social and health-giving work of our public school. 'Tis the only salvation of the nation." He is right in the main, but we must improve on our present system of teaching or we are again on the wrong trail.

The rural teachers have more hours to teach and more subjects to handle than they can handle. The rural teachers are our choicest guns of the lines, but their lot is a hard one. If you say educate the teachers and in the goodness of their noble hearts they will do the rest. It seems so. But I started once to play it out on that line, and I failed. Our county society, the old Clay County Medical Society, none better, none to try harder to alleviate suffering at a sacrifice of self, thought they would commence the fight for preventive medicine, and in midsummer when our rural teachers were not teaching, the society determined to hold a public health meeting. We invited every teacher in our county through the medium of the county papers, whose editors were loud in their praise of the meeting. I give you below the

papers read at that meeting and by whom and let you be the judge as to the benefit to be derived from listening to them.

1. Massage—Its Benefits and Injuries, Dr. F. Matthews, Secretary.

2. Hygiene of the Public School, Prof. E. C. Hamilton.

3. Pure Water, Prof. E. G. Parker of Wm. Jewell College.

4. State Medicine, Dr. H. E. Pearse, our present president.

5. Hygiene of Small Towns, Dr. E. H. Miller, the writer.

6. National Medicine, Hon. J. W. Alexander, M.C.

We had a splendid audience, splendid attention, with plenty of nice resolutions by the visitors. But when I looked over the audience I found just two rural teachers present. Then I saw we had to find some other workers in the great fields of growing, physical beings, if we expected to see in the harvest time robust and healthy boys and girls, intellectually bright, though they may be, yet back of it all no muscle or nerve to climb the rough hills of life. So often I see this sad picture.

Well, I won't multiply words. I simply, without going into the dangers of bad sanitary conditions of the schoolroom, as this ought to be known to you all, ask you is there no remedy for it? In reply let me answer you, I believe there is. If you remember the elements that always must be present else the parent atom cannot grow, cannot develop, cannot make strong muscle or healthy gray matter. And who is to know this better than the physician. Who can better disseminate this knowledge than the family physician, reaching as he does down deep into the hearts and affections of every one of his patrons. The confident and advisor in every time of trouble and if his heart is true (and they will find it out if it is not) he is the one being that only can lift the clouds in the hours of sorrow. He is sent for when sickness leaves its mark on the threshold and moist eyes exist on every side. If such is his mission, why ought he not administer in the time of health so as to show the deep waters that surround his flock if they violate the laws of nature. If the rest of the children are robust and growing and one in the family halts by the wayside and stops in the march of development, don't you think he ought to ask what is the matter with this little fellow. He seems all right, runs, plays and acts like the rest, but the sunrise of his life is shadowed by something that daily leaves its impress on the manufactory from which he draws his supply, and by and by when the school days end, what then?

He looks way out yonder in the busy world and sighs at the success made by the comrades



of his school days. The cities have someone to look after these defective organisms, but what of the rural children? Did you ever look into the dinner buckets of the children of the rural schools? I have. It would make your mouth water to see the good things they have to eat. But what follows? No one to advise this little fellow halting in his development, yet eating enough to satisfy a work-hand. The fight goes on with no captain in charge, and in the end the evening wins.

Rural physicians, it would take very little of your time to see about your school houses and the water-supply, especially when epidemics are stalking around and school is about to open in the fall, and so many other things time will only let me hint at. Some schools close from prevalence of diphtheria and scarlet fever in their midst and resume study in two or three weeks without fumigation—because there is no one to demand it. But to sum it all, I believe it is for you to do more than anyone else to shape the legislature in the future along these lines, and some day you will be one of the willing toilers who will reap the reward in having our country districts with fewer invalids in them and our country schools brighter and brighter jewels that go to make up the crown of health.

I offer this feeble effort in behalf of our homes, where dwell the tenderest ties that bind us to earth. I offer it in the name of fathers and mothers who kiss their little ones in the morning and ask us to care for them with loving hands until they return in the evening.

God pity the man who has no home.

No wife or little ones to call him dear;

No prattling voice at the close of day.

Will open the door with smiles or a tear;

Who knows not the joy when work is over

To feel "My child is waiting for me;"

God pity him most who looks in vain

For his child he ne'er again will see!

#### AN EXPLANATION OF THE EXTERNAL MALLEOLAR SIGN MADE WITH A VIEW TO INCITE TO STUDY OF IT TO DETERMINE ITS PLACE IN SEMEIOLOGY\*

CHARLES GILBERT CHADDOCK, M.D

ST. LOUIS

On May 29, 1911, I read before the St. Louis Neurological Society a paper entitled "A Preliminary Communication Concerning a New Diagnostic Nervous Sign."<sup>1</sup> I then called this sign the "external malleolar sign," and in justification of that title I said it was necessary to show that what I called a new sign had not been described to my knowledge, was an independent phenomenon elicited in a definite way, and capable of

affording diagnostic evidence of importance; that it did not occur in health or in a haphazard fashion in disease; that for practical purposes it did not require a technic too complicated for routine application; and that its manifestation was clear enough for reliable interpretation. The sign in question consists of extension of one or more or all the toes with or without fanning of them, when the external inframalleolar skin area is irritated. This phenomenon, I believe, like the well-known sign of Babinski, indicates organic disease of the spino-cortical reflex paths. I shall later mention some modifications of the foregoing statement which I deem important and which, when properly understood, lead to no confusion.

A brief résumé of a widely accepted theory of the reflexes used in clinical work may help to an understanding of what I have to present by those unaccustomed to rely on modifications of the reflexes in diagnosis.

All are familiar with the simple reflex arc as explained in physiology; *i. e.*, the centripetal path, the center and the centrifugal path. All are likewise familiar with the theory that the activity of the spinal reflex centers is under the control of higher centers, so that simple reflex action is said to be regulated by influences coming from the brain or centers in the brain. Clinically we habitually investigate certain reflexes which normally are excited in certain definite ways and manifested in certain definite manners. For example, the knee-jerk, which needs no detailed description, is exaggerated when higher cerebral control is altered; it is lost when for any reason the simple reflex arc is interrupted; it is lost also when all connection between its primary center and cerebral centers of control is destroyed. What is true of the knee-jerk is also true of the skin or superficial reflexes. By this I mean to say that the simple reflex arc as the fundamental mechanism for the manifestation of reflex action is dependent for its fixed and regular activity on higher nervous connections or associations.

Van Gehuchten<sup>2</sup> presents a prevalent theory concerning the higher reflex centers to the following effect: The skin or superficial reflexes, besides the primary reflex arc on which they depend, also have a spino-cortical arc or arcs through which they are regulated and made physiologically constant; that is, they are excitable from a given skin area and are manifested in definite muscular contractions. When the primary reflex arc is interrupted, its reflex disappears; when its related spino-cortical arc is interrupted, its reflex disappears. However, there is a different manifestation clinically when there is interruption of the simple arc and when interruption of the spino-cortical arc occurs. With interruption of the simple reflex arc, no muscular

\* Read before the Society of the City Hospital Alumni, June 15, 1911.

1. Interstate Medical Journal, July, 1911.

2. Van Gehuchten: Anatomie du Systeme Nerveux.

activity can be excited through it; but in case of interruption of the spino-cortical reflex arcs corresponding with lower primary arcs, reflex activity can still be excited through the lower arcs, but the manifestations do not conform to the physiological mode. The regulating centers from above having been cut out of the circuit, stimuli applied to the skin excite movements which normally do not occur—movements which are at variance with those that are physiological. Observation has shown that the superior controlling factor in superficial reflexes is the cerebral cortex; in other words, that the physiological skin-reflexes are cortical reflexes in fact.

The tendon or deep reflexes are also controlled from above by reflex arcs which have their centers somewhere beneath the cortex in the mid-brain. When, for example, the spinal cord is severed: that is, when there is no possibility of spinal conduction, there is abolition of the deep reflexes below the lesion, even when the fundamental reflex arcs which subserve them are intact. In brain injury it frequently happens that all deep reflexes are abolished; in other similar cases they are exaggerated.

Now, it will be noted when it is said that certain nervous lesions cause abolition of deep and superficial reflexes, that there is a distinction to be made: *i. e.*, that the tendon-reflexes are absolutely abolished in complete transverse cord lesion, whereas the superficial reflexes, while abolished in the sense that they do not occur in a physiological manner, are still excitable in an irregular and pathologic way. In other words, a living portion of the cord, having no superior connection, permits excitation of reflex movements of an irregular kind from the skin, but these movements do not conform in any way to those which normally are known as skin-reflexes. Indeed, under such circumstances we obtain certain movements which cannot be excited in health and which, therefore, have been classified as phenomena or *signs* indicative of disease of these superior and controlling reflex arcs or centers.

To repeat, a complete transverse section of the cord causes the following alteration of reflexes: the deep or tendon-reflexes are absolutely abolished below the level of the lesion; likewise the superficial reflexes are altered in the sense that irregular, abnormal muscular movements can be excited from any area of the skin below the level of the lesion, and movements thus occur which are unknown under physiological conditions. Some brain lesions abolish all reflex movements and also all signs excitable in most cases from the skin.

The most important and useful abnormal modification of normal superficial reflex action is the toe-phenomenon, familiarly known as Babinski's sign. I need only mention the fact that Babinski's sign consists of extension of the great toe, with or without extension and spreading of the

other toes, when the sole of the foot is irritated—a reversal of normal plantar flexion excited by irritation of the sole. This phenomenon can be excited not only from the sole but from indifferent and varied areas of the skin of the lower extremities, the trunk and even from areas higher up. It is, therefore, considered by Van Gehuchten to be a manifestation of uncontrolled spinal reflectivity. However, it must be remembered that Babinski's sign cannot always be excited in this indifferent way; that the point of election for its excitation, as originally pointed out by the greatest of neurologic clinicians, was and remains the plantar surface of the foot. Only in cases of certain forms of lesion of varying extent and severity, I have reason to believe, can this sign be excited from other skin areas than the plantar surface.

To quote from my previous paper<sup>3</sup>: "Some months ago, in making examinations of patients, I was struck by the ready occurrence of the Babinski phenomenon when the same form of irritation that had elicited it from the sole was applied just beneath the external malleolus, while no response could be obtained from other skin areas of the lower extremity. In cases where irritation of almost any area of skin over the lower extremity and lower abdomen called forth extensor toe-response, the external inframalleolar area did not distinguish itself in any way; that is, the response could be excited from other places as well as from this area.

"Impressed by the ready external malleolar response, I became accustomed to begin examinations of the skin reflexes by irritation of the external inframalleolar area. I thought I could always foretell thus what response would come from the sole: *i. e.*, with any response in the sense of extension or fanning of one or more or all the toes, I predicted a Babinski from the sole; with no malleolar response, I predicted normal plantar flexion. Very soon, however, I found I could not predict; that what I was expecting failed to occur. I found the following variations between the relations of malleolar non-response and response: (1) in one case of skull fracture (left side) with no external malleolar response, there was for some days complete abolition of the right skin-reflexes (plantar absent) with final return of normal plantar flexion; never any malleolar response; (2) in a number of cases in which I obtained a response from the external malleolus I obtained normal response from the sole; (3) in a few cases after persistence of malleolar response and normal plantar response, plantar response became abnormal for a time (Babinski), then disappeared, leaving external malleolar response, which finally disappeared; (4) in other cases with initial plantar and external malleolar response alike of extension, plantar abnormal response changed to normal plantar response leaving mal-

3. *Loc cit.*



leolar response persistent; (5) in many cases in which plantar response was mixed, *i. e.*, showing flexion and extension and varying strikingly with place or intensity of irritation and with voluntary jerks, external malleolar response removed any doubt of the nature of the plantar response; (6) in several cases of articular deformity limiting movements of the toes, the absence or presence of malleolar response was decisive for diagnosis."

"In only two cases presenting frank toe-phenomenon from the sole have I failed to elicit the external malleolar sign, and I think this can be explained theoretically; in several cases presenting no Babinski and many presenting doubtful Babinski, I have found the external malleolar sign reliable as indicative of cerebral lesion proved by operation, with disappearance of the external malleolar sign after operation. "I have seen it develop alone and disappear alone; I have seen it develop alone, to be joined by a Babinski, and persist after Babinski had changed to normal; I have missed it twice in cases of abolition of all skin-reflexes from cerebral lesion (fractures). It occurs often in the absence of the sign of Babinski in chronic cerebral conditions. I have never seen it in a normal individual.

"I have found it without Babinski in general paralysis, in skull fracture, in transitory unilateral brain lesions, in old hemiplegias, and in indeterminate brain lesions, single and double. I have found it in cord lesions. Never have I found it in peripheral lesions or in unmixed frank tabes."

The cases that are the basis of my observations now number more than 400. Among these are normal cases, alcoholics, epileptics, tabetics, paretics, hemiplegics (single and double), myelitics, neuritics, and a great variety of cases otherwise classifiable and, most important of all, forty cases of skull injury—fracture, gunshot penetration, and trauma capitis; and among the skull cases there are twenty-five fractures actually demonstrated, twenty-one recent, four old; of the fifteen cases classified as trauma capitis some probably were cases of skull fracture.

For practical purposes, it seems best to point out the findings as observed in actual cases; but first, I would make clear the manner of testing for this sign.

To determine the absence or presence of this sign the following procedures have been employed: With the patient in bed on the back, the lower limbs *relaxed* and extended, and wholly exposed, the soles and the ankles are readily accessible for the experiment. If possible, the limb to be tested should not be compressed or touched in any way except at the point chosen for the application of the stimulus. Recalling the possible reactions from indifferent skin areas, especially in profound cord lesions, will make the reason for this precaution clear. Of course, in restless patients it may be necessary to fix the limb, pref-

erably by forcing the thigh against the mattress. With the patient lying on the side, the limbs may be bent at the knee; and by changing sides each external malleolus is made accessible. Relaxation of the muscles of the legs and feet is very essential for the test in doubtful cases, as muscular relaxation is in tests for reflexes in general. When the patient can be examined sitting in a chair, the most convenient and satisfactory position and condition of the limb are obtained by having the limb to be examined resting on the examiner's knee (the examiner sitting at a convenient distance) so that the limb is supported at the lower portion of the calf-muscles. The examiner can change from one side of the patient to the other, thus seeing perfectly from the external aspect the ankle, foot and toes. This position permits the most accurate observation of the toe movements and perfect control of the point irritated, and of the intensity of the stimulus applied.

The irritation of the skin is best done with a rather dull steel point (a nail-file not sharp enough to wound the skin has served my purpose); in some cases the test can be made with a stout toothpick, but absence of reaction to such irritation would not be conclusive. The area to be tested is the groove which outlines the external malleolus. In this groove, the point of the instrument used should be drawn from behind forward until the depression between the malleolus and cuboid is reached. This depression seems to be the most excitable point of the area; but sometimes the posterior edge of the malleolus is the most excitable point. The degree of irritation applied should always be varied from slight stroking to rather severe scratching with considerable pressure, though it is never necessary to abrade the skin or cause actual pain. *Normally this stimulus causes no movement whatever of the toes;* it does, however, in some cases, cause reflex contraction of the thigh-muscles exactly like that observed normally when the sole of the foot is similarly irritated. The abnormal reaction consists of extension or fanning of one or more or all of the toes; I am also convinced that a movement of flexion observed in a few cases, which were otherwise shown to have organic disease of the central nervous system, had the same pathological significance as extension had in other cases. In one case in particular, with Babinski's sign on one side, there was flexion of all toes from the external malleolus of the same side, and, before examination of the opposite side, prediction was made that the reversal of movement usually observed would occur on that side: it was found with normal plantar flexion to irritation of the sole. It is notable that this reversal of movement has been observed associated with the reversal of Gordon's sign in two instances. *A striking peculiarity of the external malleolar sign is the fact that with a unilateral Babinski,*

*it is the rule to find the external malleolar sign on both sides.*

The precautions necessary in this test are thorough relaxation of the limb; repeated and varied application of the irritation; care not to confound voluntary movements of recoil or escape with those excited reflexly. Often two toes, as the second and third, are extended together, the others remaining unmoved—a movement almost, if not quite, impossible of voluntary execution; fanning of the small toes, without extension of the great toe is likewise practically impossible as a voluntary movement; abduction of the little toe, the others remaining unmoved, is also hardly possible by voluntary effort. Of course, we need to take account of what practice might make possible in toe movements in exceptional instances; very few persons, however, have developed by exercise all movements of which the toes are capable. Additional peculiarities which mark the abnormal movements excited from the external malleolus are the uniformity of the response with repeated application of the stimulus, their occurrence from a definite, limited skin area, most frequently from the depression mentioned (movements of escape occur from indifferent areas to painful or unpleasant irritation), and the electric-shock-like quality they frequently manifest. Attention given to these points will usually permit one to differentiate movements reflexly excited from the external malleolus from voluntary or defensive jerks.

An abnormal movement which I have previously described in association with the sign of Babinski, and which I have observed as remaining after that sign had disappeared, is slight inward turning of the foot with some dorsal flexion. This movement also occurs occasionally in association with the external malleolar sign. I believe it might have value as a pathologic sign to a careful and skilled observer. At any rate, its associations are very significant.

#### REPORTS OF CASES<sup>4</sup>

CASE 1.—Mary B., aged 6 years. (Service of Dr. Rassieur.) Slight fall; grew unconscious during night several hours after injury. Patient seen next day at 10 a. m.; very small lump above left ear; somnolent, but waking and protruding tongue when asked to do so; signs of slight paresis of right side. Deep reflexes normal; extension and fan of toes on right side from right external malleolus; normal flexion of right toes from sole, but Babinski can be occasionally noted from sole. Babinski on right side was overlooked or not interrupted by good observers. Left external malleolar sign with flexion of toes from sole. Diagnosis: increased intracranial pressure from hemorrhage, probably on left side. Operation revealed large extradural hemorrhage on left side. Abnormal pressure signs all disappeared within a few hours after operation; recovery. Fracture was not found under hematoma, but only when skull was denuded for decompression.

CASE 2.—Edward H., aged 10 years. (Service of Dr. Blair.) Fall from tree; entirely conscious, never un-

conscious; no sign of skull trauma whatever. Slight weakness of entire left side. Complaint of headache. Reflexes (superficial) right side: nothing from external malleolus; normal flexion from sole; left side: extension of toes from sole and from external malleolus and from external malleolus to ethyl chlorid spray; but no reaction to ethyl chlorid from left sole. Subtemporal decompression done on right side; great pressure found but no hemorrhage. Regained power immediately on left side, then lost it, then slowly regained it. Reflexes remained the same as before operation except that normal plantar flexion returned on left side leaving left external malleolar sign at the time of his discharge.

CASE 3.—W., male, colored, aged 17 years. (Service of Dr. Babler.) Trauma capitis, May 23, 1911. Unconscious for a few minutes after blow, pain in head. Left side, a large hematoma. Incision revealed no fracture; pulse slow and so continued, 44 to 68. No paralysis; *no disturbance of reflexes*; mind clear. Lumbar puncture gave bloody fluid. May 25, 26, 27, and 29, external malleolar sign on right side with normal plantar on right side. All other reflexes normal. External malleolar disappeared. Recovery.

CASE 4.—Tom, W., aged 36 years. (Service of Dr. Blair.) Severe skull fracture eighteen months ago; no operation. Mentally dull since. Deformity of forehead from healed fracture. Suspicion of general paralysis; Wassermann negative; lymphocytosis of spinal fluid; Argyll Robertson pupils; history of a chancre. All deep reflexes very lively; no clonus. Normal plantar flexion on both sides; external malleolar sign perfectly developed on left side.

CASE 5.—Congenital imbecile, male, adult. Apparently normal physically. All deep reflexes absent in legs. Double external malleolar sign perfect; normal plantar flexion. (Observation service.)

CASE 6.—T., aged 56 years. (Service of Dr. Schwab.) Right hemiplegia, with all classic signs. After several weeks began to walk, having normal right plantar flexion, but malleolar sign remained on right side.

CASE 7.—Clayton G., adult, emergency. (Service of Dr. Babler, May 8, 1911.) Depressed fracture of left upper parietal region. Never unconscious. Craniotomy by Dr. Babler. Neurological examination May 9. Normal reflexes both sides, no reaction from external malleoli. The feet are peculiar in that there is a general contracted position of all toes so that they are drawn upward and tips curled under. Irritation of soles causes slight upward movement of toes. The absence of external malleolar sign removed all doubt, and did so in emergency room before operation. Discharged recovered.

CASE 8.—George E., adult, emergency case, 10 p. m., May 20, 1911. (Reported by my interne, Dr. Deppe.) Hematoma over left occipito-parietal region. Incision and operation showed extradural clot; removed; sterility; pupils dilated and fixed; abdominal and cremastic reflexes absent; knee-jerks absent; ankle-jerks not tested. Babinski on right side, also right external malleolar. External malleolar on left side. Just before operation Babinski found—had developed on left side. Death.

CASE 9.—William K., adult. (Service of Dr. Blair, May 5, 1911.) Received with history of head injury. Incision of right hematoma revealed no fracture. Seen at 10 a. m. Semiconscious, restless, no paralysis. Face smoother on left side than right. All reflexes normal, including pupillary reactions, but skin-reflexes showed following peculiarity: irritation of left sole causes flexion of toes. Under repeated examination there was occasional extensor movements from left sole. Extension of toes marked from scratching under left external malleolus and from ethyl chlorid spray—nothing from sole to ethyl chlorid spray. Diagnosis of Babinski had been made by Dr. Hagler in presence of plantar flexion. Right side normal reaction from sole, nothing from malleolus. Right subtemporal decompression

4. All cases are from the records of the St. Louis City Hospital.



done; massive hemorrhage with brain laceration found. Patient has recovered but shows mental disturbance. Reflexes from sole normal—no malleolar.

CASE 10.—M., male, aged 35 years. (Service of Dr. Max Myer, May 8 and 9.) Alcoholic. History of having been in a fight, going home and of coming in a second time unconscious, after having had stomach washed out in emergency room at first visit. Head shaved—no hematoma found. Black eye developed on right side during morning of May 9. Seen at 10 a. m. Semiconscious, restless, no real paralysis, but left side weaker than right: pupils wide, inactive, conjugate deviation to right. All reflexes, deep and superficial, with the following exceptions, normal; repeated examination by Dr. Hagler had revealed no Babinski. I found the external malleolar sign present on the left side with normal plantar flexion, and also, the external malleolar sign excited by ethyl chlorid spray. Examined at 10, 11, 12, 12:30 and 1 o'clock; found the same anomaly and demonstrated it to several medical men. In the afternoon four lumbar punctures were made; no blood found, but fluid reported turbid. Patient clearing mentally. May 10, patient mentally clear. Denies lues; gives history of blow on right side of head eight years ago with resultant weakness of left arm. Pupils now equal and reacting normally, but left consensual is more active than right. Plantar normal on right; on left occasionally Babinski from sole, always external malleolar sign.

May 11, no left Babinski—normal flexion—no external malleolar sign. There was clear evidence of weakness of left arm. Patient gave history of severe similar attacks due to even mild drinking. Diagnosis: pachymeningitis, chronic cerebral symptoms aggravated by congestion and edema—actually relieved by rachicentesis; possibly lues. Recovered from acute condition.

CASE 11.—Mike K., aged 33 years. (Service of Dr. Blair.) No history. Received unconscious. Three hours or so without Babinski, then found on left side. Operation: low temporal decompression on right side finding large extradural clot. Wound closed; dura not opened. Next morning, at Dr. Blair's request, I examined patient. Patient had not improved. Found no actual paralysis; moved left side less than right. Toes on both sides seen in attitude of extension. On left side extension of toes easily induced from sole and from external malleolus. On the right side, nature of reaction less clear because foot is jerked away, but ethyl chlorid spray removes all doubt, causing perfect Babinski on both sides and giving the external malleolar sign on both sides. Dura was opened in old wound and copious hemorrhage found. Patient died next morning from pulmonary edema.

CASE 12.—John F., aged 31 years. Alcoholism. Syphilis twelve years ago. Right malleolar sign most perfectly developed; fanning of little toe on left side; perfect plantar flexion on both sides. All deep reflexes very lively. Pupils unequal, left pupil fixed. No reflectivity from indifferent areas. Superficial reflexes otherwise normal. Diagnosis: cerebral syphilis. No actual sign of general paralysis. No reaction to ethyl chlorid spray.

CASE 13.—Eugene T., aged 34 years; married; no children; denies lues. Has been drinking very heavily for seven months. Had a convulsive seizure on the railway train near Chicago and was brought to the City Hospital on his arrival in St. Louis. Patient presented the external signs of alcoholism, as well as arteriosclerosis. He had a left perfect, independent external malleolar sign, discovered by Dr. Schwab.

CASE 14.—Stephen B., aged 24 years. Former patient at Alexian Brothers Hospital. Good evidence of lues. Patient much demented. All deep and superficial reflexes very lively; no clonus; right Babinski and right external malleolar sign, but reversed; i. e., flexion of toes when the inframalleolar area is irritated. Left

plantar flexion and flexion of toes from left malleolar region; pupils normal. Since, as far as my observation goes, no reaction takes place from the external inframalleolar area, flexion in this case is to be interpreted as though extension had taken place.

CASE 15.—Z., aged 35 years. Mental confusion with delirium which had been taken to be alcoholic. Examination of the reflexes revealed normal pupillary action, perfect plantar reflexes, normal deep reflexes, but a left pure, perfect external malleolar sign, which led to more careful examination of the patient and this revealed double Kernig, stiff neck, and, naturally, to a diagnosis of cerebrospinal meningitis. The progress of this case led to coma with the development of double external malleolar sign, and at no time was there any Babinski from the sole—always flexion. Death; autopsy, tuberculous meningitis.

CASE 16.—B., aged 17 years. Epidemic cerebrospinal meningitis. Kernig; both plantars normal; superficial reflexes were not examined before lumbar puncture was done. Immediately after this operation the superficial reflexes were normal. Examination by Dr. Deppe. A few hours later, Dr. Deppe found a left external malleolar sign perfectly developed, with normal plantar flexion. This finding was confirmed by me on the morning of June 14. [This patient recovered; the ankle sign disappeared with disappearance of spasticity.]

CASE 17.—G. D., male, aged 48 years, colored, June 13, 1911. Demented; signs of lues; presents double Babinski; double external malleolar sign; right Argyll Robertson, left pupil fixed. He had a convulsive attack with unconsciousness last night, June 14, presents left external malleolar sign; very slight plantar flexion on left; right plantar doubtful; no right external malleolar; deep reflexes very lively; left platysma much weaker than right. The explanation of this case would seem to be that there is a lesion of the brain in the nature of a meningo-encephalitis affecting especially the right cerebrum; that a seizure occurred which brought about the double abnormal plantar reactions noted on the first day after the seizure, and on the following left only the abnormal external malleolar sign on the left side.

CASE 18.—C., adult male (reported by Dr. Deppe). Struck on head with axe. Numerous scalp wounds. Cortex protruding over left temporoparietal area. Swelling of eyelids prevented examination of pupils. Abdominal and cremasteric reflexes absent. Tendon-reflexes active and equal. 7:40 a. m.: external malleolar on left; slight plantar flexion on left; good plantar flexion on right; no external malleolar on right; 8:20 a. m.: external malleolar on right; no plantar reaction on right; the same findings on left.

One-half hour later, just before operation, Babinski's sign was obtained on the left side with other signs as before. After operation the left Babinski disappeared but both external malleolar signs remained. Patient died twelve hours later.

CASE 19.—J. W. C., adult male, June 10, 1911. Widal's reaction positive; temperature 104 degrees; right hemiplegia, classic; without right Babinski but with right external malleolar. Patient died the same day.

CASE 20.—Mary T., aged 44 years, June 6, 1911. Recent hemiplegia. Apoplectic attack a week before with unconsciousness. Presents right Babinski and right external malleolar and left external malleolar. Patient recovering. [Recovered.]

CASE 21.—S., male, aged 38 years, June 2, 1911. Infantile left cerebral hemiplegia; imbecile. Plantar reflexes normal; perfect, pure external malleolar on the left, no indifferent increased reflectivity.

CASE 22.—F. D., male, aged 34 years, May 26, 1911. Lues two years ago; left hemiplegia from which he has almost recovered, so that nothing is apparent in his movements. Left skin-reflexes absent with the

exception of the left plantar which is present; right skin-reflexes normal; left perfect external malleolar sign. This patient was examined repeatedly and occasionally there was some extension when the left sole was irritated, but under all circumstances flexion could be obtained. The presence of the left external malleolar sign in this case was extremely valuable for the interpretation of the left doubtful Babinski, and as an index of a residual lesion of the right hemisphere.

CASE 23.—E. G., male, aged 17 years. Epileptic imbecile; cerebral infantile palsy; plantar reflexes normal; external malleolar sign on both sides.

CASE 24.—K. H., male, aged 10 years. Struck by auto on May 30, 1911. Broken ribs, contusion of head and lacerated wound of left occipital region; Babinski's sign found first on the left without external malleolar. On June 1, Dr. Schwab found an association of right Babinski and right external malleolar. Examined by myself a few days later, the plantar reflexes had become entirely normal and there was no external malleolar. A diagnosis of traumatic hemorrhage was made by Dr. Schwab. Patient recovered without operation.

CASE 25.—N. G., male, aged 36 years, colored. A typical case of dementia paralytica. Left foot had been amputated for old injury. Right plantar flexion from sole; perfect external malleolar sign on right. In this case, the notable thing about the reaction was the marked extension of the middle toe without extension of the others, a movement that cannot be voluntarily made. [Examination of N. G. at the Sanitarium in September revealed the same perfect external malleolar sign in a patient presenting exquisite marks of dementia paralytica.]

CASE 26.—Child, female, aged 16 months. Epidemic cerebrospinal meningitis. Presents normal plantar flexion with double external malleolar sign. (Dr. Lippmann.)

CASE 27.—W. S., adult male. Presents signs of dementia paralytica. Both plantar reflexes normal; double external malleolar.

CASE 28.—Adult negro. Shot himself through the head with a large calibre revolver. Repeated examination of this patient showed only absence of the skin-reflexes with no abnormal skin signs and normal deep reflexes. Repeated examinations were made until he was *in extremis*.

CASE 29.—William R., adult. June 12. Recent right hemiplegia involving face, arm, and leg; presenting all the classical signs of that condition, probably due to capsular hemorrhage. Notable: right Babinski and right external malleolar sign; unable to move right side of body; moves left side easily. Left plantar flexion; left external malleolar sign perfectly developed and pure.

In my selection of the foregoing cases, I have sought to show you how this sign occurs in a variety of conditions which are due to organic disease of the central nervous system. I think they present instances, aside from the traumatic cases, of indubitable central nervous disease. I hope that they sufficiently illustrate some of the peculiarities of the occurrence of the external malleolar sign; in other words, that they show its independent unilateral manifestation; its bilateral manifestation with unilateral association with the Babinski phenomenon; its occurrence before the appearance of the Babinski phenomenon, its persistence after Babinski's sign has disappeared, though they had been earlier associated; its occurrence, and disappearance with removal of its cause. It will be noted that in

some cases it failed to appear when Babinski was present; in some cases that neither sign was at any time obtainable.

Many more cases might be cited. I am convinced of the diagnostic importance of this sign in the incipient stages of dementia paralytica, and I am also sure that it will be found in a certain number of cases of dementia præcox. Its occurrence in cases of so-called functional epilepsy may go far to prove what I have long thought—that there is no such thing as idiopathic epilepsy.

I hope I have made the matter clear enough to enable you to investigate it for yourselves.

A word of precaution I would add: the extension and fanning of the toes is not always very marked and in such cases proper clinical deductions are to be made only after repeated examination and careful noting of the quality of the movements excited, in order to differentiate a sudden voluntary movement and a movement reflexly excited. Uniformity of movement is an important quality indicative of a true reflex, the same stimulus being used to excite it repeatedly. It should always be kept in mind that even severe irritation of the inframalleolar skin areas does not normally excite movement. This fact can be clearly demonstrated in the examination of a long series of individuals. Plantar flexion excited from the external malleolus is undoubtedly as significant as extension of the toes excited from the same area. I have found this peculiar movement associated several times with a reversal of the Gordon reflex, which is, in some cases, induced by pressure of the calf-muscles along the inner border of the tibia.

In conclusion, permit me to offer a theoretical explanation of the bilateral occurrence of the external malleolar sign associated with unilateral Babinski: each hemisphere is normally connected with both lower extremities; the nervous connection of the hemisphere with the extremity of the same side is through uncrossed, homologous fibers which usually exist in considerable number, though they are very much less numerous than the fibers establishing the nervous connections of the hemisphere with the lower extremity of the opposite side. We may therefore assume, at least tentatively, that a unilateral lesion might be of such nature or mild degree of severity (affecting crossed fibers slightly) as to cause an external malleolar on the opposite side; that with increase of severity of this lesion the initial external malleolar would be joined by a Babinski (severe lesion of crossed fibers). But the profound lesion of one cerebral motor tract involves the smaller number of uncrossed fibers, loss or disturbance of innervation through which may account for the frequency with which the external malleolar occurs on the side of the lesion. Besides these anatomical grounds for this tentative explanation of the phenomenon, there are some clinical facts



which lend it support; viz., the order in which this association, single and double, has been frequently seen to develop: unilateral malleolar; then Babinski with it; then opposite malleolar; then opposite Babinski. In some cases, there has been a reverse order of disappearance, leaving the external malleolar on the side opposite the cerebral lesion. These observations refer to cases in which more or less perfect control of the facts was possible by means of cranial operations.

If my studies of this sign prove to be sound, I can foresee considerable use for it in diagnosis. It adds one more means of distinguishing with certainty between organic and functional hemiplegia, especially owing to its bilateral occurrence in the organic condition; it may ultimately reveal the severity, if not the nature, of a pathologic brain process; it may be, after more careful study of its variations and associations, an aid in distinguishing between brain and cord lesions in some cases; it may help in deciding the often difficult question of the existence of dementia paralytica; it may serve to separate early organic dementia præcox from more hopeful varieties of this common affection and help to reconcile the divergent views of this form of mental disease, which psychiatrists now entertain; it may serve to reveal the serious brain state of the chronic alcoholic, of the luetic, of the epileptic (from any cause), and thus add precision to diagnosis and give guidance in treatment. It seems destined to be of great importance as a help to the surgeon in cranial injuries, where often the existence of fracture and intracranial damage remains in doubt until such signs as that of Babinski come to give the unequivocal answer; and, finally, in cases of intracranial tumors, it will be an aid to early diagnosis.

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#### BLINDNESS FOLLOWING THE ADMINISTRATION OF ORGANIC ARSENIC

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The matter of arsenic medication becomes of especial importance on account of the almost hysterical enthusiasm with which the medical and lay world have received the announcement of Ehrlich. Similar scenes have not been enacted since the premature exposition of the Koch tuberculin. It is said that Ehrlich had to flee from his laboratory to escape the hosts of doctors and others from all quarters of the globe, speaking a babel of tongues and armed with all sorts of letters of introduction.

I had occasion to examine the eye-grounds of the first cases treated in this city by Dr. Sutton,

he having received ten doses of salvarsan from the Rockefeller Institute for a report prior to its being placed on the market. It is needless to say that the interest manifested by all concerned was as intense as were our misgivings, and the pain that some of the patients suffered. Having just observed a case of atoxyl poisoning, I determined to review the literature on the subject of organic arsenic, and it is to a more or less of a summary of this to which I beg your indulgence.

As we well know, elementary arsenic is not a poison so long as it remains such: in contact with organic matter or the atmosphere it is converted into an oxid and as such becomes a poison. For years the inorganic form of arsenic has been used in the treatment of certain conditions, and so far as I know only one case of optic atrophy has resulted from its use, though disturbances of vision have occurred and lesions of the optic nerve are recorded. Conjunctival hyperemia and other signs of intoxication are familiar to all, and are a different picture from that produced by organic compounds. De Schweinitz says of inorganic arsenic that "it is not a little remarkable, when the wide-spread pathologic lesions which occur in chronic arsenical poisoning are taken into consideration, that so few well-authenticated cases of optic nerve and retinal disturbances appear to be recorded."

It is evident then that the toxicity of arsenic depends on its molecular structure, and it is along this line that Ehrlich has been working for some time trying to produce a compound which would destroy the lower forms of organisms without injury to the host. The chemical formulæ for the organic compounds in use are similar, and in the breaking up in the host we may have reason to expect similar results. It is generally conceded that these compounds do break up in the human organism: though Iverson claims that atoxyl is excreted without change, others deny this. It is also conceded that it is the arsenic molecule and not the anilin which is poisonous in atoxyl and allied compounds as anilin poison (puriss) shows itself in optic neuritis, or a retrobulbar neuritis with concentric contraction of the field of vision and a central scotoma for red and green; it is prognostically favorable.

The most widely used drugs are atoxyl, arsa-cetin, soamin, orsudan and other aromatic compounds of similar construction. The only difference between atoxyl and soamin and orsudan is in the number of molecules of water of crystallization; they are all as neurotropic as atoxyl. Arsacetin has been much used in Europe and here; it is said to be less toxic than atoxyl and less effective. It is sodium-acetyl-arsanilate, and hence contains the acetic acid radical, differing therein from atoxyl. Sodium cacodylate is the sodium salt of dimethyl arsenic acid, and as far as I am aware it is the only arsenic compound

which has not produced blindness. Salvarsan is the diamido-dioxy-arseno-benzol. To quote from the report of the council of pharmacy of the A. M. A.: "Salvarsan is an arsenic compound containing that metal in a low state of oxidation and the product is, therefore, a powerful reducing agent and is decomposed by bodies which are oxidizers, including air. The amine groups of the body give it the character of a weak base enabling it to form salts such as the chlorid, the salt that constitutes salvarsan. Being a weak base, its hydrochlorid, when dissolved in water, is largely decomposed by the latter (hydrolysed) and hence gives a solution having an acid reaction. A solution of salvarsan is, therefore, acid and will remain so until for every molecule of salvarsan there have been added two molecules of sodium hydroxid or a similar monovalent base. Salvarsan also contains two phenol (hydroxyl) groups and in agreement with phenols in general it forms compounds with strong bases (phenolates). When, therefore, the free base from salvarsan has been precipitated by addition of an alkali and further alkali is added, a clear solution of the sodium salt will result when two further molecules of sodium hydroxid or a similar monovalent base have been added. It is the free insoluble base that is injected subcutaneously and intramuscularly in the form of a suspension and it is the alkaline water-soluble sodium salt which is injected intravenously in the form of a solution."

The following few citations to cases are typical of all reported, there being over ninety cases of disturbances in vision from atoxyl and a number from the other preparations. There are about 2 per cent. of optic atrophies following the administration of atoxyl.

Koch in 1902 reported 1,633 cases of sleeping-sickness injected with atoxyl, the result being twenty-three cases of blindness. Later examination showed optic atrophy.

Eckhard reports 134 cases of sleeping-sickness treated with arsacetin, three of which became blind. Optic atrophy is not concomitant with sleeping-sickness.

Schrimmer reports a case of optic atrophy, the patient receiving fifty-two injections, two being given each week, total amount of atoxyl being 9.9 gm.

Reute reports in detail a case of atrophy following six injections of 0.6 gm. of arsacetin, a total of 3.6 gm. being given in a period of fifteen days; vision became poor ten days after last injection. The case was one of chronic psoriasis, a condition in which optic atrophy never develops as a part of the disease.

Dr. Frank Hammer in criticizing arsacetin and its effect on the optic nerve reports two cases of blindness out of 142 cases following injections of arsacetin, the one receiving two injections in

less than a week, both doses amounting to 1.5 gm., the other receiving eight injections of 0.8 gm. in sixteen days.

Heyman reported two cases out of 104 Russian recruits that showed disturbances in vision following injection of arsacetin, the result being toxic retrobulbar neuritis.

One of the most interesting reports on the reaction of the optic nerve to arsenic compound is that of Prof. H. Wendelstadt. He used several preparations of arseno-phenyl-glycin and paroxybenzylid-arsenil-acid. He injected a number of rats. Some of the rats were infected with trypanosomata which were destroyed by the drugs, but with arseno-phenyl-glycin, two out of six became blind, optic atrophy resulting. The benzol compound also produced atrophy (dose 0.005 to 0.007 gm.).

Mr. Ernest Clarke reports two cases of blindness from injections of the arylarsenates and suggests that the combination of arsenic, anilin and syphilis may be particularly destructive to the optic nerve. He further suggests that it is one thing to risk blindness in being treated for a fatal disease like sleeping-sickness, and quite another to risk it in the treatment of syphilis. Clarke's first case, the man 46 years, received ten injections of 5 grains of soamin every other day, a month later received three more injections, a total of 75 grains, atrophy resulting. The other, a man of 49 years, received 10 grains of orsudan every other day: after the ninth dose vision began to fail, atrophy resulting.

Dr. E. C. Ellett of Memphis, Tenn., reports in a letter to me a partial recovery from arylarsenate poisoning. After a year the vision was 20/200 right and 20/20 left, field slightly contracted in left eye to the nasal side, more so in the right eye; in fact, the field in right eye is almost hemiopic. There has been no material change in his vision or fields for a year. He also cites another case, that of a man of 74 treated for multiple epitheliomata of the face and head. Vision began to fail after being treated with soamin, resulting in optic atrophy; vision 20/80 in each, fields contracted to the fixation point to the right, extending about 10 degrees to the left in each eye.

The only cases of atoxyl poisoning whose outcome was favorable are two of Fehr's, both of which had a characteristic contraction of the field of vision with atrophic disks, the central vision being normal. Total dose in these cases were 25 gm. atoxyl.

In regard to the effect of salvarsan on the optic nerve, from reports it seems to act favorably in the presence of optic-neuritis and is not as neurotoxic as atoxyl. Ehrlich states that his experiments on animals indicate that a neurotropic action is improbable. He (Ehrlich) thinks that nervous symptoms are in reality due to the dis-



ease and are of neurotoxic origin and that optic neuritis of syphilis is best treated with salvarsan: he cites cases to show improvements after injections.

I only know of one well authenticated case of optic atrophy due to "606" occurring in this country, that of Dr. Winfield's. The patient, a male, 22: gonorrhea in September, 1910; ulcer on prepuce and glans two weeks after exposure. October 10, examination: paraphimosis due to ulceration, enlarged inguinal glands; body covered with fine papular eruption; heart, lungs, kidneys and eyes normal (a careful examination being made). Gonococci present in urethral discharge; spirochetes in scrapings from ulcers; Wassermann strongly positive. October 25, injected in gluteal muscles, 0.6 gm. of salvarsan; some pain for ten days. Eruption practically gone in ten days, and in three weeks ulceration and induration of penis subsided, but no effect on inguinal adenopathy. Wassermann, November 15, weakly positive, on 25th negative. Patient dismissed November 28, having gained 15 pounds and feeling perfectly well. December 20, Wassermann negative, same February 15 and March 15. On February 4, returned complaining of slight headache and dimness of vision. Examination showed beginning optic neuritis; Wassermann negative; patient put on mercury but no improvement. In April there was optic atrophy in both eyes with almost total blindness. This condition came on gradually and progressed slowly.

Dr. Fritz Schanz (Dresden) cites two cases of optic neuritis developing after an injection of salvarsan, both of which improved and were discharged as cured, vision being practically normal in both cases.

Dr. R. Kavalenski reports a case of optic neuritis, the patient a woman of 28, injected in gluteal region the 26th of May, dismissed as cured July 24, returned complaining of intense headache and failing vision. Vision R.  $1/3$ , H.M.  $4/100$  D. left, counts fingers at 3 M., papilla swollen, diagnoses descending neuroretinitis. The relapse was a meningitis and the inflammation was propagated along the sheath of the optic nerve. Inunctions of mercury resulted in marked improvement. He therefore recommends inunctions following "606" if eye complications develop.

Drs. Gutmann and Gronne report a typical case of optic neuritis complicated with acoustic disturbances which repeated injections failed to affect. They also report the case of a girl of 18 given 0.7 gm. of salvarsan intravenously followed later by 0.5 gm. intragluteally. This was in October. In November the Wassermann was negative, but an optic neuritis developed. She was again given salvarsan which resulted in improvement in the eye symptoms.

The only case of blindness in humans as a result of organic arsenic poisoning examined anatomically is that of a woman 30 years old treated for cancerous metastasis with atoxyl. She became blind in two days, three weeks later the disks began to grow pale, and after four weeks more they were as white as porcelain. The microscopic examination which unfortunately did not extend to the eye-ball gave uniform Marchi degeneration of the peripheral extremity up to the intersection of the chiasm. This and the tract were free from lumpy growths and destructive changes nowhere, but there was parenchymatous degenerative process in the part of the optic nerve next to the chiasm and in the chiasm itself (Nonne).

From the combined reports I gather the following:

The toxic effect of all these compounds is somewhat different from that of the inorganic arsenic, tininitus, deafness, vomiting, pain, anuria being chiefly clinical manifestations. With "606" eruptions resembling scarlatina may appear with the development of a temperature that may rise to 104. This usually occurs from the eighth to the tenth day, and resembles the effect of serum treatment; the effect of the antigen creating the toxins. The field of vision becomes contracted first, more so on the nasal side, blindness finally resulting. The process is that of quinin amblyopia without the recovery.

Ophthalmoscopically there are to be seen fine vitreous opacities, narrowing of the arteries and finally a typical picture of optic atrophy. The progress of the atrophy varies from a few weeks to a year or more.

It appears that the previous use of arsenic predisposes the individual to the influence of other arsenic compounds. Watermann thinks that tabetic atrophy, alcohol, mercury and arsenic render the patient more liable to arsenic amblyopia.

There is little to be gained from the study of the dosage or the method of administration. It cannot be decided from the data in hand whether bad results are from too great single doses, or from making them too close together, or giving too much in toto. From existing data one can arrive at any conclusion, but it seems that the small, often repeated dose is the most dangerous. It may be because this has been the usual method of administration. As Schrimmer and Beek point out, it is uncommon for two doses following each other at short intervals to produce blindness; still it does, and that it is much safer to give one large dose, Ehrlich's "*dosis magna sterilisans*," than small, often repeated, doses. The amount of the dose of these substances varies as the toxicity varies. Some patients have stood enormous doses of atoxyl, while atrophy has followed eight doses of 0.1 gm.

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# CARDIOSPASM WITH SACCULATION OF THE ESOPHAGUS: ITS DIAGNOSIS AND TREATMENT\*

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A year ago it was my privilege to report before the American Gastro-Enterological Association ten cases of cardiospasm with sacculation of the esophagus. These cases were published in *The Journal of the American Medical Association* of Oct. 25, 1910. All came under my observation within a period of three years (January, 1907, to October, 1909). Since making this report I have had two more cases, one in 1910, and one, the case which I here present, in March of this year. In view of the paucity of reports on this interesting phenomenon and of the number of cases reported, a series of twelve cases is not a small one.

A few isolated examples of cardiospasm had been observed prior to 1900 when Neuman was able to collect seventy cases in the literature. As late as 1904 Von Mikulicz, one of the first to recognize and treat the affection rationally, estimated that about 100 cases could be collected; in the last seven years probably three times this number could be found in the literature. Therefore the condition may still be classed among the uncommon diseases. Uncommon for two reasons: first, because it is comparatively rare in occurrence; second, because it is not always recognized. It is not reasonable to suppose that the affection is a new one, or that it is on the increase, so its more frequent recognition in the last five years must be explained by the fact that the symptom-complex is becoming more widely known through the discussion in the literature by those whose attention has been especially directed to the condition. Personally I feel convinced that prior to 1907 I had seen but had failed to recognize early cases of cardiospasm.

Without entering into the consideration of the various theories that have been promulgated in an effort to explain the etiology of this phenomenon, suffice it to say that wherever this causative factor may lie, it produces a tonic spasm of the sphincter muscles of the cardiac orifice of the stomach resulting ultimately in a dilatation or sacculation of the esophagus above this point. There are those who believe that the dilatation of the esophagus is primary and the spasm secondary; others again believe that the two occur simultaneously; but the consensus of opinion among the majority who have studied and are studying the phenomenon is that the spasm is primary and the spindle-shaped sacculation secondary, and certainly this seems to be the logical sequence. Since the time at my disposal does not permit of a discussion of those etiologic fac-

tors that have been brought forth, I can only sum them up in the statement that we have still much to learn on this score.

We are especially interested at this time in the recognition and treatment of these cases. In the patients whom I have observed the symptoms had existed for from two to four years. In some the onset had been gradual, in others rather sudden. All of them had been treated for various disturbances, such as gastritis, ulcer of the stomach, dilatation of the stomach, pylorospasm, etc. The earliest symptoms, where the onset was gradual, were always mistaken for the milder forms of indigestion, being characterized simply by burning sensations in the epigastrium, a feeling of fulness, "a lump in the stomach," eructations of food, etc. After a few weeks or a month there begins to develop a difficulty in deglutition, and the food, the patient states, "lodges under the end of the sternum." Sometimes it can be forced through by swallowing air, again by drinking water. The patient states also that it is impossible to swallow meat or other coarse articles of food. Deglutition in the beginning is accompanied by more or less pain, especially at the moment the food is forced through the cardia. Gradually the obstruction becomes more complete and even soft foods cannot be forced through. Every effort on the part of the patient fails. He is not infrequently compelled to leave the table to empty the esophagus and then returns and eats more. The patient almost invariably states that if a glass of cold water is taken there is a complete closure and nothing more can be swallowed during the meal. As a result of all these efforts to overcome the cardiac obstruction, the retention of the food in the esophagus and the pressure produced thereby, the walls gradually yield and there develops a dilatation or ectasia. As this takes place the acute symptoms abate somewhat because of the quantity the sacculation can contain without that terrible sense of pressure which we have all experienced when paying the penalty of swallowing a large bolus of food without proper mastication. The patient soon learns to eat slowly and deliberately, chewing thoroughly, and stopping after each act of deglutition to manipulate and "tease the food" through the orifice. Warm, soft foods and liquids pass easier in the beginning, and therefore milk, eggs, gruels, puree of vegetables can be taken with comparatively little difficulty. Meat, apples and coarse vegetables will not pass at all. As the sacculation develops even the soft foods, as stated above, will be retained and finally not even liquids can be taken in any quantity. A patient will often be surprised to find that at one time he is able to swallow with comparative ease, due of course to a temporary relaxation of the spasm, and the very next moment he is unable to get anything through. After the sacculation is complete, which requires several months, the patient gets

\* Read before the Missouri State Medical Association, Kansas City, May 16, 1911.



relief from his distress only through the eructation of food, which he gradually learns to accomplish with ease after each meal. Actual vomiting and belching, however, are practically impossible. In view of the small amount of nutrition that the patient is able to take he gradually loses weight even to the point of great emaciation and becomes weak—so weak at times as to interfere with locomotion; the urine is scant, as the result of the small amount of liquids ingested, and the bowels are constipated for the same reason.

The pressure within the sac being a negative one a small quantity of fluid or food contents can always be found there. At night, therefore, the contents of the sac will in certain positions of the patient flow from the mouth during sleep, soiling the pillow, sometimes flowing into the nose, and in three of my cases flowed into the trachea, causing fits of coughing and strangulation. One patient found that when he turned to the left side the contents always gravitated into his mouth. In some cases the spasm develops very suddenly and without any of the prodromal symptoms mentioned in the beginning.

With such a typical symptom-complex as I have just described, the diagnosis of cardiospasm can be made even without further examination. However, instrumentation should always be resorted to in order to complete the diagnosis. Bougies are introduced and meet with a complete obstruction about 41 cm. from the teeth. A very small stomach tube with a mandarin or bougie can usually be passed through the stenosis while larger ones cannot be passed at all. The patient may be given a bismuth mixture and through the fluoroscope the size of the sacculum can be definitely outlined. The esophagoscope was introduced in several of my cases and revealed the flabby walls of the sac, but in no case was I able to see the actual point of stenosis. I have devised an appliance by means of which the size of the sacculum can be determined definitely. It consists of a rubber bag attached to the end of a stomach tube. The bag is introduced into the sac and gradually inflated with water to a point of great discomfort to the patient; the water is then withdrawn and measured. This gives approximately the volume of sacculum encountered. In several cases I was able to get a small tube into the stomach, pouring in a carmine solution and then withdrawing the tube into the esophagus, pouring in a methylene-blue solution. In a half-hour the tube was again introduced and both these solutions withdrawn separately.

Through the examination of the contents removed from the sacculum, it can be definitely shown that it is not gastric contents. While acid in reaction the acidity is due to lactic acid. There is always a considerable amount of sugar present as a result of the conversion of the starches into maltose and glucose within the sac-

culum. The general macroscopic appearance of the contents is very different from that removed from the stomach. Not infrequently, through the careful manipulation of tubes with mandarins, the contents of the esophageal sac and the stomach contents can be obtained separately. In the one case hydrochloric acid and pepsin may be present in the normal amount, while in the other they are totally absent.

The treatment of cardiospasm is directed toward an overstretching or paralyzing of the cardia sphincter. Formerly the treatment was surgical and Von Mikulicz, who operated on twenty-one cases, stated that he was unwilling to use any manipulation from above where he could not see what was going on. In these cases gastrostomy with forcible dilatation was done. Recent developments, however, have shown cardiospasm to be one of the few mechanical obstructions that cannot be justly claimed by the surgeon, and so far as I know they are not making the claim except in the so-called impermeable cardiospasm, which I have not encountered.

The obstruction in these cases is a mechanical one and must be relieved by mechanical means. Those who speak of curing cases by medicinal means purely have certainly not encountered cardiospasm with dilatation of the esophagus, but doubtless have in mind esophagus-spasm, which is encountered from time to time in nervous individuals and is purely transitory in nature. The treatment should be directed toward the stretching of the cardia and the cleansing of the esophageal pouch. The former was accomplished in my cases through the use of a cardia dilator consisting of a tube at the end of which is attached a silk bag with a layer of rubber internal and external to it. Through careful measurements this bag is introduced into the cardia by aid of a mandarin, which gives stability to the tube. When the bag is in place, gradual hydraulic pressure is exerted, either by attaching the tube to the water-cock with the attachment of a dial to indicate the degree of pressure used, or through the use of a large glass and metal syringe containing 250 c.c. of water. I have preferred the latter in my own work, relying on my own judgment and the patient's sensations for the degree of pressure used. The patient is instructed to take a soft diet until it is found, through a gradual gradation of the diet, that he is capable of taking solids of all kinds. It must be borne in mind, however, that the sacculum while it may become smaller following the stretching of the cardia never regains its normal tonus. The esophageal peristalsis therefore is practically absent in this portion of the esophagus, and for this reason more or less care should be constantly exercised with reference to the diet. It is by far the safest plan to have the patient confine himself to a soft diet for a considerable period of time. The number of stretchings necessary for

complete relief will vary from two to ten in different cases. The cases should be kept under observation and on the slightest evidence of a recurrence of the symptoms the operation should be repeated.

### SOME EXAMPLES OF EXTRAGENITAL SYPHILIS \*

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There is not enough attention given to the early diagnosis of syphilis. With extragenital syphilis, as a rule, the diagnosis is made late, because as Fournier says, "not much intelligence is required for the diagnosis of extragenital syphilis, but a great deal of learning is necessary for the physician to think of it." Extragenital syphilitic infection demands our interest not only from the point of view of its prophylaxis but also from the standpoint of its early diagnosis. The fact that I am able to present here as many as fifteen cases is ample proof of the contagiousness of syphilis.

In many of these cases the clinical evidences of syphilis were quite plain. Typical primary and secondary eruption, glandular enlargement, mucous patches, and sore throat were present. In some cases, however, a comparatively early diagnosis was made before the primary showed very great induration and before secondaries appeared. The use of the dark stage apparatus and the Wassermann reaction have been of the greatest value to me in the study of suspicious lesions. I have found that in general, in chancre, the Wassermann test is positive extremely early, and is of great diagnostic value. The recognition of *Spirochæta pallida* with a dark stage, together with the Wassermann test, makes possible the diagnosis of syphilitic lesions extremely early. In this way the diagnosis of several of these cases was made before any characteristic symptoms appeared. Sometimes the initial lesion was extremely small in the beginning and quite insignificant; the progress of the disease was very slow, yet a positive diagnosis of syphilis was made early. I would especially emphasize that syphilis is not necessarily a rapid, progressive disease.

The following cases are from the St. Louis Skin and Cancer Hospital, obtained through the kindness of Drs. M. F. Engman and W. H. Mook, and from my services at the City Hospital and the Alexian Brothers' Hospital. They are comparatively recent cases. The extragenital chancres are located on the lip, on the eye-lid, cheek, tongue, chin and nose. They are as follows:

#### CASES PERSONALLY OBSERVED AND STUDIED

*Patient No. 1.*—Chancre of the lower lip. A case of primary, secondary, and tertiary syphilis. Skin and Cancer Hospital. A little girl of 12 years of age, has a large indurated ulcer of lower lip at right angle. There is a maculopapular eruption over the entire body. Numerous punched-out, clean cut and nodular gummatous lesions of the skin are present on the body and extremities. The dark stage examination shows *Spirochæta pallida* in the serum extracted from the lesions of the lip. Wassermann reaction was positive. This patient was given mercurial treatment and in three months all lesions had healed. The treatment was discontinued by the patient for two weeks, when the chancre on the lip again became ulcerated. Treatment was again resumed and in a few days the chancre once more disappeared. This case represents a very malignant type of syphilis having present the three distinct stages of the disease.



Patient No. 5.

*Patient No. 2.*—Chancre of the lower lip. Skin and Cancer Hospital. Patient is a young Russian housewife of 24 years of age. In the middle of the lower lip is a hard indurated ulcer of ten weeks' duration. A maculopapular syphilid is present covering the entire body. Later, while under observation, a second primary lesion developed on the upper lip, opposite the one on the lower. This infection was contracted from the husband.

*Patient No. 3.*—Chancre of the lower lip. Skin and Cancer Hospital. Negro girl 19 years of age came to the clinic with a hard, indurated swelling of the central part of the lower lip. The ulcer was covered with a thick crust. A maculopapular eruption was present on the body. There was no history of the source of infection.

\* Read at the Fifty-Fourth Annual Meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.



*Patient No. 4.*—Chancre of the lower lip. Skin and Cancer Hospital. Bartender 30 years of age has a small, round, projecting ulcer on the right side of the lower lip. A maculopapular eruption is present over the entire body. The origin of the infection is unknown.

*Patient No. 5.*—Chancre of the upper lip. City Hospital. A mulatto servant girl, 19 years of age has a reddened, swollen, ulcerating lesion in the middle of the upper lip, of two months' duration. On the lower lip, opposite, is a second smaller hard ulcer which is only of two weeks' duration. There is a maculopapular eruption over the entire body. The lymphatic glands are enlarged in the cervical region. Headache, pain in the joints, fever, night sweats, and sore throat are present. The lover of this patient was seen and gives a history of a primary lesion 10 months before. He had mucous patches until recently in spite of almost continuous internal medication.

*Patient No. 6.*—Chancre of the upper lip. Skin and Cancer Hospital. A young man, 24 years of age, has a large projecting indurated primary lesion, occupying two-thirds of the central portion of the upper lip, of six weeks' duration. The glandular swelling about the face and neck was quite typical. The Wassermann reaction was positive. This patient was given 6/10 gm. salvarsan intravenously which was followed in 12 hours by a characteristic chill and a rise in temperature to 101.5° F. Five days later a maculopapular eruption appeared over the abdomen. The patient was observed without treatment for 10 days during which the secondary eruption showed no tendency to disappear and the primary lesion on the lip did not improve. The patient was then given daily injections of bichlorid of mercury in increasing doses, together with potassium iodid internally, and improvement was noted within one week. After this time the secondaries disappeared rapidly and the chancre on the lip improved and now, two months after entrance to the hospital, a slightly indurated scar is present at the site of the primary and pigmented areas show the marks of the secondary eruption. Recently, the patient was given 6/10 gm. salvarsan, intramuscularly.

*Patient No. 7.*—Chancre of the upper lip. Skin and Cancer Hospital. Young housewife, 22 years of age, presents a large, bleeding, ulcerating and swollen primary lesion involving more than two-thirds of the upper lip. The duration is two months. The entire body is covered with a maculopapular secondary syphilid. *Spirochæta pallida* were found in the serum from the lesion. The Wassermann reaction was positive. The patient stated that her husband had the same disease.

*Patient No. 8.*—Chancre of the upper lip. Alexian Brothers' Hospital. A young man, 21 years of age, shows a large, bulging, bleeding, initial lesion on the middle of the upper lip. A macular syphilid is present over the entire body. The lymph glands are enlarged greatly in the cervical region. Night sweats, sore throat, and loss of hair were present. The duration of this lesion was less than two months. *Spirochæta pallida* and also *Spirochæta refringens* were present in the secretion from the ulcer on the lip. The Wassermann test was positive. The source of infection in this patient was readily traced to a young girl who had been under treatment in the Alexian Brothers' Dispensary a few months previously and who had discontinued treatment. This patient was given 6/10 gm. salvarsan intramuscularly and the chancre disappeared in three weeks. Since then, the patient has returned with a relapse.

*Patient No. 9.*—Chancre of the nose. Skin and Cancer Hospital. A boy of 10 years of age, had a large, indurated, ulcerating lesion located on the left nares. There is maculopapular eruption over the entire body and general glandular enlargement is present. Patient is anemic. Infection occurred probably in this case, through picking the nose.

*Patient No. 10.*—Chancre of the nose. Skin and Cancer Hospital. A young man with a clean cut ulcer, having a depressed center and indurated elevated edges. The ulcer is located on the left side of the nose and is about as large as a dime. Patient is covered with a mild macular secondary eruption. The source of this infection is unknown.

*Patient No. 11.*—Chancre of the nose. Skin and Cancer Hospital. A young man, 30 years of age, had an ulcerated lesion of the nose, heavily crusted, and extending down on the upper lip. A secondary macular eruption was present over the body. The source of the infection could not be traced.

*Patient No. 12.*—Chancre of the cheek. Private case of Dr. W. H. Mook. A young man, 30 years of age, presented a round, hard, ulcerating primary lesion on the right cheek. Six weeks previous to observation, the patient had received an abrasion at the site of the lesion by falling against a door-knob. That same afternoon patient spent with a gypsy, who kissed the abrasion several times to make it well. The abrasion did not get well, and gradually developed into a typical primary syphilis. When patient was first examined the body was covered with a typical macular secondary syphilis.

*Patient No. 13.*—Chancre of the chin. Patient was in the New York Skin and Cancer Hospital, service of Dr. L. D. Bulkley. This man, 30 years of age, had a typical indurated, crusted, primary lesion of the left side of the chin. Typical macular secondaries were present over the entire body. The source of infection was unknown, though it was probably received in a barber shop in getting a shave.

*Patient No. 14.*—Chancre of the tongue. Skin and Cancer Hospital. Patient is a young man, 22 years of age, with a distinctive crater-form ulcer of one month's duration on the tip of the tongue. No secondary eruption was present. The examination of this ulcer with the dark stage illumination showed *Spirochæta pallida*. The Wassermann reaction was positive. This lesion, like chancres in general when located on mucous membranes, was rapidly becoming destructive. The patient was given mercurial injections and the chancre healed rapidly. No secondary eruption ever appeared.

*Patient No. 15.*—Chancre of the eye-lid. Private case of Dr. M. F. Engman. A young man, physician, on examination showed a small slightly indurated ulcer on the conjunctiva of the lower lid of the left eye, near the outer canthus. It was a typical Hunterian chancre. The submaxillary glands on the left side were greatly enlarged. There was no secondary eruption. *Spirochæta pallida* were found in material from the lesion by dark stage examination. Patient was given bichlorid of mercury injections and the lesions disappeared. One year later, the Wassermann reaction was negative, and treatment was discontinued for three months when a typical, profuse, macular, secondary eruption appeared. Treatment was then resumed with the disappearance of all symptoms.

*Patient No. 16.*—Infectious granuloma. Skin and Cancer Hospital. This case is presented to illustrate how easily a mistake in diagnosis can be made from clinical observation alone. When the patient was first examined, a sharply defined fungous-like ulcer upon the outer third of the upper lip which had been present for four weeks. In this young man the submaxillary glands on the right side were markedly enlarged and indurated. There was no pain. A diagnosis of primary syphilis was made. As is customary at the Skin and Cancer Hospital, very many specimens were examined, and no *Spirochæta pallida* were found. The Wassermann reaction was negative. The lesion was then treated by local applications and healed in three weeks, leaving a small non-indurated scar. For many months the patient was examined at intervals and no secondaries ever developed. The Wassermann reaction remained negative.

## CONCLUSION

A history of exposure to syphilitic infection is apparently of not much diagnostic importance in extragenital chancre. In all these patients the attempt was made to trace the source of the infection, but in no instance was the history of any value in making a diagnosis. While in many cases from the facts which were obtained, it was quite evident with whom the patient had been in contact and the manner of the infection, yet in other cases the origin of the infection was unknown. As the manner of extragenital syphilitic infection is so varied and infection may be produced in so many ways, no attention need be given to the history from the diagnostic side.

For the diagnosis of suspicious infections about the body where the question of a primary syphilitic lesion comes up, the use of the dark stage apparatus to search for *Spirochæta pallida* and the Wassermann reaction are of the greatest value.

In the search for *Spirochæta pallida*, in material from extragenital syphilitic lesions having their location about the face, excellent examples of which I have shown, other spirochetes may be met with which are quite similar and may be confused with the microorganism causing syphilis. The various mouth spirochetes, *Spirochæta buccalis*, *Spirochæta pallida buccalis*, *Spirochæta refringens* and *Spirilla dentriculi*, are to be distinguished in all microscopical preparations from the *Spirochæta pallida*. Of diagnostic value is the fact that the *Spirochæta pallida* has a large number of even, stiff, corkscrew-shaped spirals, and that these spirals and this stiffness persists even when the organism is quite under the dark stage, or when killed in stained preparations. For the diagnosis of spirochetes other than that of syphilis, it should be kept in mind that they frequently show only a few spirals or show uneven spirals, and when at rest or in the stained specimen these spirals become more or less straightened out.

The Wassermann reaction is a valuable adjunct when made by trained hands. It must always be made according to the technic of Wassermann. All modifications are far more unreliable.

In the greater number of these patients the chancre was located on the lip, and such lesions, when small, are apt to be confused with other conditions. All suspicious cases should be observed until a diagnosis is made clinically and confirmed by laboratory findings. Oftentimes, clinically, the course of syphilis is very atypical. One cannot always and in fact should never wait for the appearance of a secondary eruption to make the diagnosis of syphilis. Secondaries mean a further and greater infection of the system. Very frequently mild secondaries are overlooked or they may not develop, and secondary eruptions, especially in a healthy robust individual, may disappear leav-

ing no pigmentation. Waiting for clinical signs such as secondaries may be in vain and may be allowed only in conjunction with the careful study of material from the supposed chancre in connection with frequent serum tests.

## THE ROENTGEN-RAY TREATMENT OF GOITER \*

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Several years ago fairly good results in some cases of goiter were reported by treatment with the x-ray. At that time there was no distinction made between the different causes of enlargement of the thyroid gland in their treatment with the x-ray, but all enlargements were treated. Later a large number of failures were reported when treated by the x-ray. Since that time we have learned to treat only certain forms of enlargement with the x-ray, and in these selected cases we can practically always get improvement and symptomatically cure a large per cent.

The x-ray will not destroy the part of the enlargement which is due to fibrous tissue or calcareous deposit. So we can exclude from Röntgen treatment the fibrous and calcareous forms of goiter. Undoubtedly when these enlargements by their pressure are causing symptoms, or it is desired to get rid of them for a cosmetic effect, such part should be removed surgically as is indicated. The x-ray is indicated in the treatment of those cases in which there is an increased glandular activity resulting in an over-secretion from the gland, which acts as a poison and brings on part or all of the following symptoms: increased pulse-rate, thrill in the thyroid gland, inability to approximate the eyelids completely; exophthalmos may or may not be present; lack of control of movements of the eye-ball; inability to go up a hill or stairs quickly; easily frightened; inability to sleep at night; headaches; indigestion; inability to concentrate the mind, and a general lowered resistance of the whole body. Generally all the symptoms of exophthalmic goiter are present with the exception that the exophthalmos is absent in many cases.

The course of thyroid enlargements differs greatly in different cases. In some cases there is a continual increase in the secreting glands of the thyroid when the extra secretion will act as a poison and gradually increase all the symptoms. Some cases will reach a certain point and improve for a long time with simply rest, but as a general thing, sooner or later, the symptoms reappear and the patient gets worse.

In this class of cases if part of the gland is removed surgically when the secreting portion of the gland is not enlarging, good results will be

\* Read in the General Session, Missouri State Medical Association, Kansas City, May 16, 1911.



obtained immediately and will often continue for a long time, but as a general thing, later enlargement will again take place. In those cases in which the secreting portion of the gland is gradually enlarging, I do not think they should ever be operated on either by cutting off the blood-supply by ligating or removing part of the gland; although good results appear very shortly after, the operation does not prevent the continued enlargement of the remaining portion of the gland, and this will nearly always take place, leaving the patient as bad off in a year or so after the operation as before. These cases should all be treated by the *x-ray*.

In the treatment of sixty-eight cases all have improved with the exception of five cases of acute enlargement of the gland in which the patient died before the *x-ray* had time to produce any effect. Many of these cases have gone over a period of four to six years and are symptomatically cured.

When the *x-ray* once destroys a tissue it is very seldom that it ever returns. As an example of this I would cite the case of chronic necrosis produced in *x-ray* operators. When the skin has once been destroyed over a very large area, it generally will not grow in of itself, but skin grafting or some stimulating treatment has to be resorted to and even then it is oftentimes six months to a year before repair takes place. The nails have a lowered resistance to the *x-ray* and when they are destroyed by it, it is seldom that they ever come back.

The *x-ray* has a special action on gland tissue which is enlarging. This is especially true in the thyroid glands and the spleen. The thyroid gland is comparatively superficial and if the correct dose of the ray is given, we can generally destroy a part of it without destroying the healthy skin. In these cases it is all important to give the right dose. The *x-ray* in small doses is a stimulant to any structure. If this dose is increased a little it produces a local alternative effect; that is, the parts will be destroyed, but repair will take place as rapidly as destruction. If it is applied to the skin in this way, the outer skin will peel off on an average of ten days after exposure, but a new skin will have formed and taken its place. If this dose is increased still further destruction will take place more rapidly than repair and we get the so-called burn, which is in reality a necrosis. Just why this is so we do not know, but it is probably due to the effect on the trophic nerves.

There is no other agent in the world that acts like the *x-ray*. Any other agent which always destroys tissue will produce its destruction generally accompanied by pain within a few minutes or at the most a few hours after the application is made. With the *x-ray* it is quite different. If I would apply the ray long enough to-day to a place on my hand, say 2 inches in diameter, suf-

ficient to produce the necrosis or so-called burn, I would feel nothing at the time of application; in from three days to three weeks, but on an average of about ten days, a severe inflammation would take place with the accompanying necrosis. If the tissue were examined by a microscope before this inflammation started, it would be impossible to discover any change from the normal. So from the effects of the *x-ray*, we can easily see how necessary it is to give the correct dosage, that is, the one which will destroy the enlarged secreting glands but not destroy the normal structures. Of course care must be exercised not to destroy too much of the thyroid glands as the results would be just as disastrous as removing all of it surgically. Fibrous and calcareous tissues do not have a less resistance than muscle and skin to the *x-ray*, consequently it is very easy to see why in those cases of enlarged thyroid when that enlargement is due to the above causes and not to enlargement of the secreting glands, the ray should not be applied, and if it is applied, why we do not obtain favorable results.

Of course there is a class of cases in which we have a mixed growth. In these cases I think it advisable to remove part surgically and then give the patient a course of *x-ray* treatment to prevent an enlargement of the remaining gland structure at a later time.

There is one other class of cases which I might speak of, that is malignant disease of the thyroid. This is always a serious condition and I believe the gland after a diagnosis has been made, should be removed and the operation followed by a course of *x-ray* treatment.

Dr. Hal Foster, a member of this Association, in the last five years has referred eight cases to me for treatment. The general symptoms in all the cases were the same. Some had a higher pulse-rate than others, and some had the exophthalmos while others did not. Of these cases, six are symptomatically well to the best of my knowledge. One case, Mrs. J., was improving but contracted the grip and did not appear for treatment afterward. Another improved slightly but it was not satisfactory and the case was operated on, and I lost track of her.

#### REPORTS OF CASES

Dr. O. P. Faires, referred a case, Mrs. L., to me, who had had an enlargement of the thyroid with the usual symptoms and had been operated on. The patient's condition improved immediately, the pulse went down to normal and this improvement lasted about eight months when the symptoms commenced to return. The patient was quite a heavy woman, weighing 206 pounds. She lost flesh until she was down to 156 pounds, with great depression; the heart-beat was 140 to 150; could not sleep at night but a few hours and was very weak. I applied the ray to this patient over a period of five months. She gradually improved, regained her former weight and a little more, and for the last four years has been apparently perfectly well.

Another patient, Mrs. J. L. H., referred by Dr. O. J. Furst of Peabody, Kansas. Pulse-rate 140, thrill in gland, exophthalmos. Patient had lost thirty pounds in six months; general depression; headaches; nervous; inability to concentrate mind; food did not digest properly. Ray was applied to her over a period of five months when patient had to return to her home. She had regained her weight and was nearly well, but had a great fear that it was only temporary, and had some nervous symptoms, which I think, were due to this fear. I saw the patient one year after she had returned home, and although she had had an attack of typhoid fever, she was in perfect physical condition.

Patient, Mrs. J. A. E., referred by Dr. Burt Wheeler, pulse 150 with great depression. In fact, the patient could only walk a few steps. She had been employed by the telephone company and received most of the complaints from subscribers. It was thought for a long time that her nervous condition was due to her worrying over these complaints. Exophthalmos, thrill in thyroid; gland, however, enlarged very little. This was probably one reason why a diagnosis had not been made earlier. I treated her over a period of three months, during which time she gradually improved to such an extent that she could go back to her work half a day at a time, although I advised against this, on account of the nervous strain of the position. But she thought she would have to take her position. Suggested that it might hurry her cure to have part of the gland removed, which was done, by Doctor N. O. Harrelson, with immediate good results. Patient soon returned to her work and has had no further trouble in the last three years.

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#### REBREATHING IN ETHER ADMINISTRATION WITH SPECIAL REFERENCE TO THE CARBON DIOXID CONTENT \*

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The demonstration of the analgesic properties of ether by Morton at the Massachusetts General Hospital in 1846 made possible the marvelous surgery of to-day. Since that time medical science has been interested in two great problems: first, the theory of ether narcosis; and second, the best method of administering ether.

The first problem seems to have been settled by Meyer and Overton in 1901 who, working independently, came to the conclusion that the narcotizing substance enters into a loose physico-chemical combination with the vitally important lipoids of the cells, perhaps with the lecithin, and in so doing changes their normal relationship to the other cell constituents through which an inhibition of the entire cell chemism results. It also becomes evident that the narcosis immediately disappears as soon as the loose reversible combination, dependent on the solution tension, breaks up. The length of this time lasts from two days to several weeks, and is more or less proportionate to the amount of ether inhaled and the duration of the anesthesia.

The second problem is still a debatable one since many factors enter into its solution, such

as the lessened power of the patient to resist infection following anesthesia, shock and post-operative toxemia. Tyrod, in reviewing the studies of Graham and others on the effects of anesthetics on the bactericidal power of the blood, comes to the conclusion that the shorter the operation and the smaller the quantity of the anesthetic the better are the chances of avoiding infection.

Ferguson also considers that the essential element in administering ether is to make the anesthesia as short as possible, and administer at any time during anesthesia only a minimum amount of the anesthetic, since the increment of post-operative depression due to the anesthetic depends on the quantity of the anesthetic absorbed rather than on the time the patient is kept under the influence. While the duration of the anesthesia is always of some moment, it becomes a very *important* factor when the quantity of the anesthetic administered is greater than is necessary to keep the patient just relaxed.

The work of Haldane and Priestly on lung ventilation, in which they showed that apnea is dependent on a fall of carbon dioxide pressure in the respiratory center to below the threshold exciting value, the oxygen pressure being at the same time sufficiently high not to excite the center, should have attracted the attention of anesthesiologists; but it remained for Henderson in his classic works on shock to bring out the value of carbon dioxide in anesthesia. He states that the normal regulator of respiration by the carbon dioxide of the arterial blood, as shown by Haldane and Priestly, indirectly insures the maintenance of the venous stream in health, but under operative and other abnormal conditions the development of acapnia (or a diminution of the carbon dioxide in the blood) induces venous stagnation, cardiac inefficiency, fall of arterial pressure and shock. He believes that carbon dioxide exerts a stimulative action on the vasomotor and cardio-inhibitory center as well as on the respiratory center. The respiratory center is, however, much more sensitive to the action of carbon dioxide than the others. He was able merely by regulating the rate of pulmonary ventilation to adjust the heart to any desired rate of beat. Thus a reduction of the carbon dioxide content of the blood causes, as a rule, shallow, feeble respirations, a rapid pulse and low blood-pressure; while the excess of carbon dioxide causes deepened respiration, slowing of the pulse, and increase of blood-pressure.

A consideration of these studies on carbon dioxide would seem to indicate that a properly conducted ether anesthesia should conserve the output of carbon dioxide or even increase it, and the most logical solution of the problem seems to me to be the old method of administering ether by rebreathing.

The work of Gatch in 1910 supports the views of Henderson as well as the contention for

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rebreathing in ether. He employed the rebreathing method with nitrous oxid gas and oxygen and concludes that (1) rebreathing, provided enough oxygen be given to prevent cyanosis, can be permitted for a surprisingly long time without any appreciable injurious results. (2) The pulse, respiration and blood-pressure, once anesthesia is established, are very little affected by the trauma of operation. (3) A pulse rapid before operation is nearly always slowed when rebreathing is permitted for some length of time. Very sick patients with rapid pulse and quick, shallow respirations actually seem benefited by this form of anesthesia. (4) There is usually a well-marked and sustained rise of blood-pressure during this form of narcosis. (5) The heat of the exhaled gases has also an important action in preventing loss of body heat and also in heating the gases (nitrous oxid and carbon dioxid):

So far as I have been able to learn, there has been no similar attempt to demonstrate the benefit of ether rebreathing or even to explain its advantages scientifically. The rebreathing method of giving ether is the oldest one, and the explanation for it was the belief that anesthesia could only be induced by the rigid exclusion of air on account of the extreme volatility of the ether. This we know to be wrong and with the advent of the simple manner of giving ether by the drop method on an open inhaler, the rebreathing method fell into disuse.

In 1907 I published a paper on the "Ethyl Chlorid-Ether Sequence with the Bennett Inhaler" and a comparative study of the drop method with the Esmarch inhaler. My conclusions were that with the Bennett inhaler the patient's color remained good throughout, the minimum amount of anesthetic was given, and postoperative vomiting was very markedly reduced, the amount of ether and the vomiting being approximately one-half less than with the drop method. Another advantage is the passage of the respirations through the ether-saturated gauze which tends to warm the ether vapor.

The experiments recently reported by Seelig on warmed ether vapor are instructive. He found the temperature of ether passed through a heated coil fell to its original temperature when the ether passed out of the coil. From this it would seem to prove that rebreathing is the only possible way of warming ether vapor. In spite of this evidence, the method was criticized on account of the rebreathing, the critics basing their belief on the theory that carbon dioxid constantly rebreathed must produce injurious results.

In order to estimate how great this factor was, and to answer criticism intelligently, I determined to measure the percentages of carbon dioxid and oxygen for a definite period of time. With all the valves of the Bennett inhaler closed and the ether container packed with gauze as for an anesthesia, I breathed for a period of ten min-

utes through the apparatus, holding it as tightly as possible to my face to prevent the entrance or escape of air. A sample of the air in the face piece was collected and the carbon dioxid and oxygen determined. A series of such experiments was conducted and also during ether administration with practically the same results. The carbon dioxid was never raised above 4.4 per cent, nor the oxygen lowered below 16 per cent.

In the normal air there is 20 per cent. of oxygen and 0.04 of 1 per cent. of carbon dioxid. It is only when oxygen reaches 13 per cent. or carbon dioxid is raised to 3 per cent. that a patient at rest begins to notice the change. During the anesthesia the index for opening the air valves was the patient's color. At no time was the valve closed for ten minutes. The closure of the valve was employed during early anesthesia or when it became necessary to concentrate the anesthetic, and when surgical anesthesia was attained sufficient air was admitted to keep the patient's color good.

In order to ascertain the effect of carbon dioxid, Dr. Lyon of St. Louis University Medical Department, who directed me in this problem, made some very interesting experiments on the effects of breathing carbon dioxid. Dogs were employed in these experiments and blood-pressure and respiratory tracings were made. The carbon dioxid was administered pure, and in varying percentages with air or ether. The most striking features of these experiments were the effect on the blood-pressure, which was invariably raised, and on the increase in the depth of the respirations. That carbon dioxid is a stimulant to respiration is well known to physiologists; combining this fact with the above, that is the blood-pressure-raising properties, it was considered not only not injurious but of decided advantage in ether anesthesia. In addition to these effects carbon dioxid has the further advantage of having anesthetic properties and for this reason the amount of ether required is decidedly diminished.

To summarize briefly we have concluded that (1) a rebreathing apparatus produces the most perfect anesthesia, all things considered. (2) The amount of ether is lessened, an important factor on account of the cell degeneration produced by the more powerful anesthetics as ether and chloroform. (3) The ether vapor is warmed by the passage of the warm breath back and forth over the ether vapor. (4) The carbon dioxid is slightly anesthetic, toxic only in large doses, and therefore tends to reduce the amount of ether. (5) The presence of the carbon dioxid stimulates respiration, increases the blood-pressure and prevents shock, properties quite essential in an anesthesia.

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## VENOUS ANESTHESIA \*

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In the last decade modern surgery has grown and widened its field of usefulness in every direction. One of its greatest as well as most practical achievements was accomplished by Professor Bier of Berlin, when he demonstrated the possibility of obtaining complete anesthesia by means of the veins. Prior to this discovery no operation of any importance could be performed on the extremities without the aid of a general anesthetic. Hence delicate, complicated, painful and time-consuming operations became proportionately grave, threatening the patient's life and oftentimes adding to the mortality in the operative field.

Brown of Leipsic was the first to bring into notice conduction anesthesia of the nerves. This requires a very accurate knowledge of anatomy and for this reason, perhaps, has not been sufficiently adopted by the profession. Conduction anesthesia is produced by a perineural or — after the nerve trunk has been exposed — by an endoneural injection of an isotonic saline solution of cocaine.

So-called "venous" anesthesia comes practically under the classification of "conduction" anesthesia; the anesthetizing solution finding its way into the nerve trunks, doing away with the difficult task of injecting the individual nerves. Unfortunately the use of this anesthesia is limited for it can only be applied where Esmark's depletion can be accomplished.

The instruments needed are as follows: three rubber bandages about 3 yards long, which have been previously boiled and are kept in a 3 per cent. carbolic acid solution; a Janet syringe holding about 100 c.c.; strong rubber tubing about the size of a lead pencil — one end having a metal attachment for making connection with syringe, the other arranged to connect with the cannula (the cannula having a strong stop-cock); one scalpel; two small retractors; one pair pointed scissors; one pair thumb forceps; one ligature carrier; and a few hemostat forceps. For the injection a 0.5 per cent. novocain solution is used.

The technic is as follows: the extremity is disinfected; for ordinary purposes tincture of iodine will suffice. The part is then covered with sterilized towels. It is very essential that there be a complete depletion; the retained blood within the veins will not only dilute the anes-

thetic but predisposes toward it finding its way into the circulation. For this reason it is advisable to raise the extremity for five or ten minutes before applying what is called the expulsion bandage. This is started at the extreme end of the extremity, e. g., finger tips or toes. This bandage is applied very tightly and carried up almost to the elbow or knee joint, as the case may be. No harm can result from such tight bandaging as it remains in position for only a short time. The second, or central bandage, is started where the first leaves off and is carried above the joint for about 3 or 4 inches and fastened. After the latter is in position the expulsion bandage is removed and the third or peripheral bandage is applied below the central bandage for 2 or 3 inches, leaving a short space between it and the central bandage. By applying the peripheral bandage constriction is increased, which forces the anesthetic quickly into the tissue between these two bandages; this is demonstrated by the appearance of immediate anesthesia in this area, which is called by Bier "direct" anesthesia in contrast with "indirect" anesthesia which appears in about ten minute below the peripheral bandage. It also reduces the amount of anesthetic required.

After the bandages are in place a small area is injected after Schleich's method and the vein is laid free by a transverse incision. A silk ligature is placed around the vein and an opening is made large enough for the insertion of the cannula. This is introduced in the direction toward the periphery. After it is fastened securely the solution is then injected. The amounts generally necessary to obtain anesthesia are: in a child's arm, 30 to 40 c.c.; in a child's leg, 50 to 60 c.c.; in an adult's arm, 50 to 70 c.c.; in an adult's leg, 70 to 100 c.c.; a good guide as to the amount of solution to be used can be determined by the size and musculature of the patient. For the beginner it is well to use the larger amounts, for as much as 150 c.c. have been injected without any ill effects. If one fears after-effects and prefers to take precaution, the cannula can be left in position during the operation. After it is finished the novocain solution can be washed out with a normal salt solution. Where sudden overcharging of the system is feared, the effect can be readily overcome by letting the solution flow gradually into the circulation. This is accomplished by removing the central bandage for a minute, then reapplying the same and continuing in this manner several times.

The veins most suitable for the injection are the subcutaneous, large and anatomically well-known, e. g., the median cephalic or median basilic in the arm, and in the lower extremity the internal saphenous. Practically, one can use any vein of sufficient caliber to admit the cannula.

### ADVANTAGES

1. Duration. The anesthesia will last as long as the central bandage is left intact. Should it

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be removed, it will disappear very quickly, e. g., in about five minutes.

2. No after-effects. Occasionally motor paralysis is seen; this persists only for a few days, requiring no special treatment.

3. Is ideal in heart, lung and kidney diseases. Addison's and advanced Basedow's disease, etc., for it is in these cases especially that the surgeon fears the general anesthetic.

#### CONTRA-INDICATIONS

1. In children under 10 years on account of their nervous temperaments.

2. In diabetes and senile gangrene, as the application of the bandage might cause fresh areas of gangrene.

3. Should not be used where Haekenbruch or Oberst local anesthesia can be applied. (Haekenbruch's method consists of simply encircling the operative area by a ring of novocain injections; in Oberst anesthesia constriction is brought into use. The latter is limited to fingers and toes.)

Inflammation and suppuration are no contra-indication. In these cases one can use what is known as the direct method. The extremity is raised and with gentle massage as much blood as possible is removed. The central bandage is applied at once, then the peripheral; the remainder of the operation being carried out as described above.

#### THE MENACE TO EYESIGHT FROM TRACHOMA \*

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I desire to bring this subject to the attention of the profession of Missouri for the reason that I believe—and I am not alone in this belief—that trachoma is on the increase in the state of Missouri, and that our people are not alive to the fact that “granulated lids” is a serious menace to eyesight. As a rule victims of trachoma drift along without treatment until vision becomes impaired by reason of the development of corneal complications. These patients pay little attention to the lid heaviness, increased mucopurulent secretion and agglutination of the lids after sleep. If, perchance, they do seek medical advice in the first stage they are entirely unwilling to submit to any course of treatment which will interfere with their occupation. To sacrifice time and money to get relief from what they regard as simple “sore eyes” is not to be considered for a moment. In consequence the physician rarely has the opportunity of seriously undertaking the management of a case of trachoma until the time has passed when a cure can be effected without some loss of vision. If the trachoma victim be so fortunate as to arrive at the

ciatricial stage without suffering corneal irregularity, he may not even then be “out of the woods.” Frequently entropion develops so that the lashes are directed backward and continually rub the surface of the cornea. Attempted repair is thwarted by repeated abrasions of the epithelium. By the time relief is obtained through operation the center of the cornea is so distorted that clear and accurate vision is no longer possible.

Trachoma is a disease of great antiquity. We are assured by Hirschberg that it existed fully 3,000 years ago. It existed then, as now, in endemic form in many localities, and, indeed, where the conditions were favorable it overran entire countries, e. g., Egypt. From Egypt it was imported into the continent of Europe early in the nineteenth century by Napoleon's soldiers and rapidly became disseminated.

Trachoma was brought to the United States by European immigrants coming from infected districts. It is, then, speaking from the standpoint of the United States, an “alien” disease.

The most frightful results of trachoma are to be seen in Egypt where much the largest proportion of blindness is attributable to this cause. According to Snyder,<sup>1</sup> 60 per cent. of all blindness in Europe is caused by trachoma. In Russia and the Baltic Provinces 96 per cent. of all trachoma patients become “more or less blind.” Clark<sup>2</sup> states that “75 per cent. of untreated cases of trachoma result in blindness.” In a careful study of trachoma in Illinois, Wilder<sup>3</sup> asserts that “owing to neglect or precaution to prevent its spread and to the inability or neglect of the patients to have it properly treated, trachoma probably causes more blindness than any other disease of the eye, except gonorrheal ophthalmia and optic atrophy.” Adams<sup>4</sup> found that forty-one out of 451 pupils, i. e., 9.09 per cent., were blind from trachoma and that this disease was second on the list of idiopathic diseases causing blindness, being preceded only by ophthalmia neonatorum. S. M. Green, superintendent Missouri School for the Blind, informs me that during the last ten years thirteen Missouri children blind from trachoma have been admitted to our state blind school. Even when the disease stops short of producing complete blindness, it seriously interferes with the workability of the eyes. J. W. Schereschewsky,<sup>5</sup> writing on this point, says: “It is astonishing to what degree slight alterations in the corneal tissues, as the result of trachoma, may reduce the sight. Even slight haziness may reduce the vision to 1/10 of normal. Pressure of the thickened lids and a macerating influence of the trachomatous secretions may so soften the corneal tissues and alter the corneal

1. Ohio State Med. Jour., March 15, 1909.

2. Report on Trachoma, P. II. and M.-H. S., 1907.

3. Ophthalmic Record, November, 1901.

4. Twenty-Sixth Biennial Report of the Illinois State School for the Blind.

5. Report on Trachoma, P. II. and M.-H. S., 1907.

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

curvature that high degrees of irregular astigmatism, not susceptible to correction by glasses, are encountered.

The menace to the vision in any untreated case is very real, even in cases initially mild, as subsequent exacerbations may induce a train of destructive corneal lesions. Trachoma decreases not only the economic efficiency of the sufferer, but that of the race or people as a whole among whom it is prevalent. A person afflicted with trachoma is not on a par of productive capacity with a healthy individual. As the earning capacity of the victim decreases, he must needs satisfy himself with a lower standard of existence, thereby not only exposing himself but others who are dependent on his efforts to those conditions of increasing poverty, filth and unhygienic surroundings which are known especially to foster the disease and to facilitate its distribution. In this manner the vicious circle is completed."

#### TRACHOMA IN THE UNITED STATES

Up to 1897 immigrants afflicted with trachoma were permitted to enter the country without let or hindrance. In this year the disease was classed under the head of "dangerous contagious" by the United States Public Health and Marine-Hospital Service, thus making mandatory the deportation of aliens so afflicted. The object of this ruling, as stated in a book of instructions issued to the medical officers, was "not only to prevent the introduction into this country of a communicable disease, but also to keep out a class of persons from whom so large a proportion of the inmates of institutions for the blind and recipients of public charity are recruited." The rules further specified that a steamship company permitting an immigrant with developed trachoma to embark must pay a fine of \$100 and bear the expense of deportation. The steamship companies have learned by experience that it is not good business policy to book victims of trachoma and so have instituted a rigorous inspection of the eyes of all immigrants about to embark. At Italian ports medical officers of the Public Health and Marine-Hospital Service are on duty and detect practically every case of trachoma among prospective immigrants.

For several years subsequent to the adoption of this ruling many infected immigrants resorted to trickery to pass the inspector. Prior to embarkation they provided themselves, or were furnished by their physicians, with little vials of one of the adrenal solutions, which they instilled secretly into the eyes just prior to disembarking. Thus many trachomatous conjunctivas, relieved of congestion, appeared to brief inspection but little altered from the normal.

The laws now operative seem adequate to prevent the entry of all but a small number of trachoma victims. It is impossible to say how many immigrants with trachoma were permitted to

enter the country prior to the act of 1897, but judging from the number annually deported for this cause since the law went into effect, the former number must have been large. We may gain some idea of the probable annual importation of trachoma prior to 1897 by referring to the last (1910) annual report of the commissioner general of immigration, which shows that 6,400 cases of trachoma were debarred from embarking, 2,600 were debarred from landing and deported, and ten were deported, having developed trachoma within three years of landing.

Prior to 1897 immigrants with trachoma, in common with their fellows not so afflicted, distributed themselves far and wide throughout the United States, some remaining in the port of arrival, others finding their way to inland cities, still others to rural communities of the west and south. Wherever conditions were favorable (bad housing, overcrowding, lack of ventilation, uncleanly habits), the disease, spreading from the original source, soon gained a foothold in the community. One frequently hears how "red-sore-eyes" ran through a village school, scarcely sparing a single pupil; or the invasion was more insidious until many, perhaps the majority, of the people in a township were affected. It is well known that once the disease gets a foothold in boarding schools, prisons, barracks, camps, etc., it is apt to spread like wildfire. A recent experience in St. Louis is illustrative. It was observed that a few children at the Industrial School had some discharge from the eyes, and a systematic inspection revealed the fact that nearly 100 children were infected with the initial stages of trachoma. Prompt removal to the hospital and energetic surgical treatment, together with careful ocular inspection of all new admissions to the school, has checked the incipient epidemic. Trachoma is readily spread by Polish, Italian, Hungarian and Russian laborers, who herd together like so many sheep and whose personal habits are far from cleanly. Railroad construction gangs encamped in some out of the way spot are frequently visited by trachoma epidemics. When we learn that one wash-basin and a few towels (which are never washed) are all the lavatory perquisites of 150 men or more, it does not require much imagination to understand how one infected individual may, in a short time, infect all his companions.

#### LOCALITIES IN WHICH TRACHOMA IS KNOWN TO BE ENDEMIC

Many of the towns of southern Illinois are veritable hotbeds of trachoma. Northern Arkansas is seriously infected. The following excerpt from the Twenty-First Biennial Report of the Arkansas School for the Blind indicates how serious is the menace to sight from trachoma in that state:



"The condition in Arkansas shows a larger proportion of pupils in school with trachoma than from all other causes, and a larger per cent. than is shown to exist in other states. The northeastern and northwestern portions of the state constitute the principal areas of infection. The eastern and southern portions are almost entirely free as far as shown by our records. In the Arkansas school the number of pupils enrolled 1908-10 was 199 white and twenty-eight colored. The number of cases of trachoma and blindness caused from trachoma was 115."

Dr. J. A. Stucky of Lexington, Ky., who recently made a journey into the heart of the mountain regions of eastern Kentucky, makes the following report:

"I found that in families where there were children it was an exception to find only one case of diseased eyes. In one instance, seven out of the nine children were unable to attend school on account of trachoma. Such cases as these are not allowed to attend our schools, and yet in the mountains they are not considered infectious or dangerous, but just "sore" eyes. A solution to the problem in the mountains is the same as in the state, the question of education. Many of those who need surgical treatment and hospital care have not the financial means to obtain these. The county in which they live contains no institution where they can be cared for without personal expense, and the county treasury contains no funds to provide for even the hospital care elsewhere."

The following two cases are cited to show how terrible may be the effect of this disease when it attacks persons in whom poor hygienic surroundings, no medical care, and undernourishment combine to furnish a favorable soil:

#### REPORTS OF CASES

A. J., age 46, had been suffering from trachoma for twenty-five years. He was a poor renter on a farm and, with a large family of children to support, found it nearly impossible to make both ends meet. He had no time and little opportunity to give his eyes attention. Minute corneal ulcerations gave rise to conjunctival overgrowths (pseudopterygia) which eventually covered both corneas. R. V.=finger counting at 3 feet; L. V.=finger counting at 1 foot. Repeated operations which included canthoplasty, perideotomy, removal of the conjunctival overgrowths, and an optical iridectomy in the right eye, resulted in R. V. 5/100; L. V.=finger counting at 10 feet.

Annie J., daughter of A. J., now aged 14, had been suffering from trachoma since the age of 6. At one period she had evidently passed through a mixed infection which resulted in perforating ulcers of either cornea. R. eye, adherent leukoma. L. eye, secondary glaucoma with enormous distension of the anterior part of the globe. An optical iridectomy in the right eye improved vision from hand motion to ability to see the largest letters a few feet away. The left eye was enucleated. This child will undoubtedly have to be educated in the school for the blind.

#### EFFORTS, LEGISLATIVE AND SOCIAL, DIRECTED AGAINST TRACHOMA

Since 1905 Pennsylvania has classified trachoma with twenty-six other diseases as "contagious" and these are made reportable to the health authorities. In 1909 Philadelphia passed an ordinance requiring the reporting of all cases of trachoma, with residence and personal data of those affected, and the disinfection of a room or house which has harbored a trachoma patient. The city ophthalmologist visits the patient and advises the proper course to pursue. Since 1905 New York has maintained a "trachoma hospital" and two trachoma dispensaries.

The problem of the trachoma child is a serious one. Debarred by the inspector from school he is in danger of losing all chance for education during the only years in which education is possible. London has met this problem in the schools by establishing the so-called "trachoma homes" under the auspices of the Metropolitan Asylums Board. These homes comprise a central administration building and separate houses under the charge of a house mother, each house lodging twelve children. Living under excellent hygienic conditions and adequately treated by specialists these children pursue their education without interruption during the period of cure.

In the foregoing I have endeavored to present to you the "trachoma problem" and have given a brief outline of some of the methods successfully applied to its solution. What has Missouri done to solve this problem? I regret to state that, so far as I can ascertain, Missouri has done nothing. In this state trachoma is not classified as a contagious disease and is not reportable to any city or county health board, and hence statistics as to its prevalence are not available. If northern Arkansas and southern Illinois are seriously infected, it is highly probable that southern Missouri and probably other parts of the state have not escaped. The collective experience of Missouri physicians would doubtless furnish reliable data on this point, and I hope to undertake an investigation with this end in view. My own ideas are based on the opinion of some of my ophthalmic colleagues in St. Louis and the fact that in my own practice I have seen approximately three times as many cases of trachoma in the years 1908-09-10 as in the three years preceding, 1905-06-07.

The trachoma problem is a social as well as a medical problem. As citizens of the state we should actively support educational, philanthropic and legislative measures which experience has shown to be effective in curbing this wretched disease and minimizing its effects.

I desire to enlist the profession of Missouri in an active campaign in support of the following program:

The public should be instructed that trachoma is not just "sore eyes," but a serious contagious

disease; that it is conveyed by transfer of contagion from infected to healthy eyes; that scaling blepharitis is *not* trachoma; that treatment should never be postponed till vision begins to fail (development of corneal complications); that neglected trachoma nearly always leads to impaired vision and sometimes to total blindness.

Provision should be made in all general hospitals for a ward devoted to trachoma and other contagious eye diseases, thus affording opportunity for isolation and adequate surgical treatment.

The great need of a state ophthalmic hospital similar to the Illinois Charitable Eye and Ear Infirmary should be insisted on and public opinion shaped to the end of demanding such an institution of the legislature.

Trachoma in children can only be effectively controlled by a state-wide medical inspection of school children. We should support all legislative efforts along these lines.

In districts seriously infected with trachoma, the school board should provide for "trachoma schools" with gratuitous ophthalmic service.

Trachoma should be classified as a contagious disease and made reportable to health boards.

Rooms and houses which have harbored victims of trachoma should be disinfected.

Systematic inspection of the eyes of soldiers in barracks, prisoners, children in reformatories, etc., will often lead to the discovery of cases of trachoma, and prompt isolation will prevent the spread of the disease.

#### BUTTERMILK AS AN INFANT FOOD

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Although the title of this paper is not a new one,<sup>1</sup> the writer feels that the subject is worthy of repetition at this time. We have in buttermilk a food that requires little modification, and is available not only in the cities where milk laboratories fill prescriptions according to the physician's directions, but is easily obtainable in smaller towns and especially in the country.

The early literature as mentioned by Fischer,<sup>2</sup> Baginsky and others dates back to an article written by Campert in 1790, and to another by DeBallot of Holland, in 1865. Since the year 1895 numerous writers have presented the subject. Baginsky,<sup>1</sup> in 1902, reviewed the work of DeJager, DeMattos, and Salge, together with his own experiences at the Kaiser and Kaiserin Friedrich Hospital.

In the last few years the medical press, more especially of Europe, has had frequent references to it. The commonness with which buttermilk is fed to bottle infants on the Continent, and the opportunity of seeing it successfully used in an institution in Berlin led me to try it frequently

in the last eighteen months, and it is my purpose to present some of these experiences in this paper.

The digestibility of the nitrogenous portion of the buttermilk and the low percentage of fat certainly bring less work to the digestive tract.<sup>3</sup> The percentages naturally vary,<sup>4</sup> but seldom is the fat as high as 1 per cent., while the sugar and albumin are slightly less than in sweet milk. Metschnikoff<sup>5</sup> has recently experimented at the Kaiserin Auguste Victoria Anstalt in Charlottenburg on the question Wherein lies the value of buttermilk nourishment? and he concludes that it is not the acidity nor the fat-splitting ferments, but it is the carbohydrate content which is more suitable than in the fat-containing foods.

Many different mixtures have been brought out, among them the so-called Dutch infant food which is made of sour cream and a pure culture of lactic acid bacilli.<sup>5</sup> Casein milk, so widely recommended by Finkelstein and other German pediatricians, contains a certain amount of buttermilk. Recently Brady of St. Louis<sup>6</sup> recounts a series of cases in which he has had better results with artificially acidified milk, but quotes Le Fétra and Kerley of New York<sup>7</sup> as having become discouraged with the use of it. Finkelstein and Baginsky of Berlin recommend the use of buttermilk made from the natural souring of cream. While I have used artificial buttermilk in older children, I have not tried it in young infants. The experiences from which my conclusions are gathered concern the feeding of naturally soured buttermilk to sick and well infants less than 8 months old. Furthermore, no commercial buttermilk was used.

The coarse lumps that form in buttermilk when heated would probably be more or less indigestible<sup>2</sup> in the infant stomach, and would certainly be drawn with difficulty through the nipple of the bottle. To prevent the coagulation of the milk, DeMattos advocated the addition of flour before the buttermilk is heated, and this is used in most cases. Most observers state that there are few if any curds in the stools in buttermilk babies, and that the color is seldom green. For some reason a certain amount of regurgitation of buttermilk occurs early in its administration which after a few days or weeks disappears.

Commercial buttermilk is notoriously bad, and the same difficulty of securing clean, fresh buttermilk which most everyone encounters led me to prepare it according to the following directions. I have endeavored in each case to obtain the purest, freshest, richest sweet milk that can be provided in the community: The top 9 ounces is removed from a quart bottle of milk after it has stood on ice from six to eight hours, without being disturbed, and this added to similar top milk taken from one or more other bottles making, in case three bottles have been used, 27 ounces, which is sufficient in most cases. This is put in a clean quart bottle, stoppered, and kept in a temperature which permits souring in

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.



twenty-four hours. It is then ready for churning, which can be done by simply placing this sour top milk in a quart jar, closed and agitated for a few minutes until the butter separates. The butter, and the milk which was originally left in the bottles after removal of top milk are by-products which in many families can be used to advantage, thus reducing the cost of the buttermilk.

A small churn easily cleaned, made of glass and steel is on the market and the churning can be done more rapidly.

Sufficient buttermilk will be obtained from this quantity of top milk so that when diluted as is often done, the necessary quantity for twenty-four hours will be at hand. Dilutions of from one-third buttermilk to three-fourths, or even stronger are used; hence the quantity of top milk used may be inconsiderable, or enough to be of considerable expense to the family in case 3 or 4 quarts of milk are needed each day. This can usually be estimated at two bottles of 6 to 15 cents per quart of milk daily, depending on whether one is in the small town or city. But, as I have previously stated, the family can use the by-products to advantage.

It takes some experience and instruction to teach the method of heating the buttermilk for use, because of the fact that simple heating causes buttermilk to curdle. From one-fourth to one-half ounce of white or barley flour is thoroughly rubbed up with a small portion of buttermilk, any lumps are strained out, and this added to the diluted buttermilk, placed in a double boiler, brought to the boiling point slowly, while constantly stirred, allowed to cool for ten minutes, and twice again brought to the boiling point in similar fashion. It is then poured into the necessary number of feeding bottles for the twenty-four hours feeding, placed on ice, and warmed in a water bath when needed for feeding. Buttermilk does not flow so readily through the nipple, which must therefore have somewhat of a larger opening.

Malt sugar, cane or milk sugar may be added to this as desired. Likewise after the infant has reached the stage where the addition of fat to the buttermilk is advisable, top milk may be added.

The three cases which I shall cite are characteristic of those which do well on buttermilk feeding. My conclusions are not drawn from these three cases alone. New-born, and older healthy infants, infants with gastro-intestinal infections, with hereditary syphilis, with whooping-cough, and with various other diseases were included in the number.

#### REPORTS OF CASES

CASE 1.—This is one of the cases so frequently seen where every food suggested has been tried unsuccessfully, and in which wet-nursing was also unsuccessful. Baby G., 6½ months old, girl, bright, only child, parents unusually healthy. Mother had had no miscarriages. For a few days after birth had the breast, but for the remainder of the 6½ months, had been fed on a variety of proprietary foods and milk modifica-

tions, milk especially disagreeing with the child. Stools since birth are said to have contained mucus in large quantities and to have been usually green, finally becoming constipated. At this time barley water and wet-nursing were being used. Infant showed marked atrophy and the weight was 3,600 grams. Albumin water was given for 24 hours because of the loose bowel movements which had appeared. During the day the child was on albumin water, it lost 360 grams. It was then put on half buttermilk and water with malt sugar, gaining 200 grams in the next ten days. The formula was then increased to buttermilk 30 ounces, water 5 ounces, white flour ½ ounce and malt sugar 2 ounces, upon which it has been fed until the present time gaining from 500 to 1,000 grams per month, the last 4 months.

CASE 2.—Baby W. This was a healthy child, age 30 days, weighing 3,536 grams at birth, fed on breast for 10 days, and then upon a sweet milk formula containing 2½ per cent. fat for the next 20 days, during which time it gained only 150 grams. At this time we began using half buttermilk and water with flour, and in a few days a small amount of top milk was added. During the next 23 days the infant gained only 200 grams. The top milk was withdrawn, the buttermilk was increased to two-thirds and the child gained 800 grams in the next 20 days at which time the infant was taken from the hospital.

CASE 3.—Baby M. Weighed 3,515 grams at birth and was on breast 13 days at which time his weight dropped to 3,080. He was put on modified sweet milk for the next 40 days at which time, about 2 months of age, he weighed just what he did at birth. He was put upon half buttermilk and water with malt sugar and has gained from 400 to 600 grams a month since then; he now being 6½ months old and weighing about 6 kilograms. For the past month top milk has been added so that he is getting 2 per cent. fat in his buttermilk.

#### CONCLUSIONS

I do not believe that buttermilk should be considered as a substitute for sweet milk in the feeding of healthy infants.

My experiences prove to me that the cases for the feeding of buttermilk as for any other form of milk should be selected, and that the daily weight and other evidences of gaining should be closely watched.

Buttermilk is more especially suited to sick infants, those with marasmus, chronic enterocolitis, exudative diathesis, and those that are commonly termed difficult feeding cases.

It may be given for a period of several months without causing unfavorable symptoms, and top milk may be gradually added if desired.

It is especially of value in the summer months, at which season it will be better tolerated and will produce better stools than the same case would have done on a sweet milk mixture.

Chilling and proper handling of a clean fresh milk is essential to the successful administration and good results in buttermilk feeding.

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## REMARKS ON THE DIETETICS OF INFANCY \*

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It is my belief that physicians in recent years in their enthusiasm over artificial feeding have overlooked its limitations. This is due in part to the widespread use of artificial feeding and to the fact that the patent infant foods with their extravagant claims are constantly before our eyes. While all agree that breast milk is the ideal food for an infant many fail to estimate the latitude allowed them in persisting with artificial feeding in a difficult case.

The indications for withholding the breast from the infant are well understood. A mother suffering from tuberculosis, puerperal fever, nephritis, epilepsy, chorea, or weakened from post-partum hemorrhage, would certainly be advised against nursing her infant. On the other hand, what are the indications for breast feeding and what may be expected from breast feeding? It is true that each pediatricist confronted with a difficult feeding case must be guided by his own experience in the length of time he may still persist with artificial feeding. While the principles of artificial feeding may be learned from books, experience and close observation are the hand-maids to success in this difficult field. The physician must be as familiar with the symptoms of unsuccessful artificial feeding, necessitating breast milk, as he is with the symptoms of unsuccessful breast feeding. My experience leads me to believe that breast milk frequently is entirely forgotten as a therapeutic agent for the sick infant. Many infants are unnecessarily weaned. The rule that failure to gain in weight is the only indication for weaning should still stand. Colic, green stools and general fretfulness are very often due to overfeeding. If instead of ten feedings in twenty-four hours, the number be reduced to five with a liberal supply of water between, many an infant will be able to continue at the breast. It is not always a paucity in the breast secretion which leads to a resort to artificial feeding. Frequently we see an infant weaned and the mother has an abundant flow of milk. If it were ascertained the amount of breast milk that infant's metabolism can tolerate, weaning would often be unnecessary. There is not much to be found in the literature on the effect of breast milk on a sick infant. Keller's<sup>1</sup> article is very instructive; he gives the histories of twenty-three sick infants in an institution placed at the breast. Some of his observations will be referred to below.

We will now consider when it is time to abandon artificial feeding. To begin with, premature infants demand breast milk; no substitute should be considered. An infant under 3 months is in greater danger from artificial feeding than an

older infant. The carbohydrates which are such a valuable therapeutic agent for a sick infant after the third month, must before this time be used with great discretion. Therefore in an older infant we are justified in temporizing in an endeavor to adjust the diet to the digestive and assimilative powers of the infant. During the early weeks we must be quick of action; if the infant does not show signs of responding to the dietetic treatment and is losing weight, a temporary resort to breast milk will remove the difficulties and a little later allow us again to resort to the bottle.

Finkelstein's<sup>2,3,4,5</sup> articles, which are spread over four numbers of the *Jahrbuch für Kinderheilkunde*, relative to the rôle played by the carbohydrates, is being more and more accepted every day. Escherich doubted many years ago that the proteids of cow's milk were responsible for the difficulties encountered by the infant on a diet of cow's milk. Then followed Keller<sup>6</sup> and Czerny with the observation that it was the fat which caused the difficulty. Apparently as a continuation of this work Finkelstein and Meyer turned their attention to the effect of milk sugar on the infant's organism.

An infant in the early weeks will do best on an artificial food containing a small percentage of fat (1 per cent.), a moderate percentage of proteid (1.25 to 1.75 per cent.), and a carbohydrate; as the infant takes on weight the percentage of fat is gradually increased to 3, 3.5, and in some instances 4 per cent. will be well tolerated. Special consideration is demanded of the carbohydrate. Milk sugar I no longer use, in spite of the fact that it is the carbohydrate normally found in human milk. Finkelstein believes it is the cause of the intoxications seen in infancy, more so even than bacteria. I have long ago discontinued the use of whey in infant feeding; I have used it in a routine way in fully 700 feeding cases. It was used in the place of water in the milk mixture. A large number of green stools and diarrhea were believed to be due to its use. Cane sugar and maltose are much better tolerated by the infant organism. To a quart mixture I usually add one-half to one ounce of sugar. That it is not proper to feed an infant an excessively high percentage of proteid would seem to be verified by the observation of Hoobler<sup>7</sup> in a metabolism experiment. This investigator found that in high proteid feeding a larger amount of nitrogen is absorbed and eliminated, thus causing more work to be performed by the infant than on a lower proteid diet. This would be a severe strain on the delicate metabolism of the infant.

Finkelstein's "Eiweiss Milch,"<sup>8</sup> which is the outcome of his large series of observations, repre-

2. *Jahrb. f. Kinderh.*, January, 1907, p. 1.

3. *Jahrb. f. Kinderh.*, July, 1907, p. 1.

4. *Jahrb. f. Kinderh.*, November, 1908, p. 521.

5. *Jahrb. f. Kinderh.*, December, 1908, p. 692.

6. *Des Kindes Ernährung, Ernährungs-Stroung und Ernährungs-Therapie*, 1909; Franz Denticke, Leipzig and Vienna.

7. *Archiv. Pediat.*, November, 1910, p. 853.

8. *Jahrb. f. Kinderh.*, May and June, 1910.

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

1. *Jahrb. f. Kinderh.*, 1901.



sents a very high proteid diet. He teaches that fermentation of milk sugar gives rise to dyspepsia and diarrhea. The less concentrated the whey in the mixture the less liable the milk sugar is to ferment. The presence of a high percentage of casein prevents sugar fermentation. The carbohydrates bring about an accumulation of salts and water in the cells of the body which causes an increase of the body weight, a necessary forerunner of the multiplication of the cells of the body. The carbohydrate best suited to this is maltose. In severe cases of disturbances of nutrition the water and salts are very loosely combined with the tissues; by withdrawing the carbohydrates from the diet there results a rapid pouring out of the body salts and water which results in a rapid loss in weight. With these facts in mind, Finkelstein began feeding his albumin milk with an addition of 2 to 7 per cent. of food maltose. It is made by precipitating the casein of a quart of milk with pepsin, straining off the whey, and passing the curd through a sieve several times. One pint of water is added making the mixture look like milk; then one pint of buttermilk is added. This mixture has the following formula: proteid 3.00, fat 2.50, sugar 1.50, salts 1.50. Finkelstein states that he was unable to make this product satisfactorily, so turned its manufacture over to a milk laboratory where machinery was available. I was exceedingly anxious to try the merits of this mixture. The author's results with the factory product were little short of brilliant. I first employed this food in cases of severe dyspepsia in young infants. Their condition was such that none could have been saved except by the assistance of breast milk. The stools rapidly took on a good color, lost their green appearance and became formed, but the infants rapidly lost weight and succumbed in the course of two weeks. I also administered this food to healthy infants at birth, but owing to the poor results had to stop the procedure. Chapin<sup>9</sup> has recently reported on the use of this mixture and his results certainly would not lead one to try the method. I feel, however, that better results may be obtained from the factory product and have made efforts to secure a supply. Recent reports from other German clinics confirm Finkelstein's results.

The symptom-complex characteristic of a sugar intoxication consist of disturbances of consciousness, characteristic alteration in breathing, alimentary glycosuria, fever, collapse, diarrhea, albuminuria and casts, drop in weight and leukocytosis. All these subside on withdrawal of the offending element. The symptom usually first to draw the attention of the mother to the infant is the diarrhea. This is looked on as causative of the disturbance of consciousness, fever, collapse and drop in weight. A purgative and a diet of

barley water is ordered. The infant immediately begins to improve and the diet is gradually increased. I have observed this group of symptoms scores of times subside just as rapidly if instead of barley water, buttermilk sweetened, if necessary, with one grain of saccharin to the quart, or one-half skim milk and water unsweetened, is fed. This diet cures owing to the low content of sugar.

The secret to the indication when a difficult feeding case is to be placed on the breast is revealed when we investigate the carbohydrate tolerance of that infant.

The remedy for a large group of sick infants (milk injury, Czerny-Keller), are the carbohydrates. For these infants to recover it is necessary to feed them a liberal quantity of carbohydrates, low fat and a moderate percentage of proteid. If the case is a severe one, the best results will be obtained by the use of two carbohydrates, flour and cane sugar. It requires a special study to adjust the carbohydrate percentage to the tolerance of the infant. If too little is added the infant will not gain; if on the other hand the percentage is too high, the infant becomes restless, loses weight, and vomiting and diarrhea set in, the symptoms of an intoxication. If the infant cannot tolerate that percentage which is necessary for an increase of weight, the indication is present absolutely to stop artificial feeding and apply the infant to the breast. It is at times possible to raise the tolerance to a degree sufficient to bring about a regular gain in weight by withdrawal of all carbohydrates, relatively speaking, for a certain length of time; that is, by not adding any sugar to the mixture. After a lapse of a few days there is a gradual addition of carbohydrates to the diet with recovery of the patient. Thus we see that carbohydrate tolerance up to a certain point is a *sine qua non* for successful artificial feeding.

My most brilliant results in artificial feeding have been obtained in the class of cases showing the symptoms described by Czerny as "milk injury." Clinically this is manifested in the early stages by a restlessness and sleeplessness of the little patient. Moreover, the stool assumes a more or less gray to white color and always much dryer so that it does not soil the napkin: the odor is offensive. In the course of time the infants become pale, lose weight, and the abdomen from an accumulation of gas becomes tympanitic. If the case is not properly treated the development of marasmus is only a question of time. These stools have been proved chemically to be soaps of the fatty acids, and are known as soap stools. The color is due to the colorless urobilinogen, which is the product of bilirubin. A diet low in fat, high in carbohydrate and this preferably in the form of maltose, and a moderate percentage of proteid gives excellent results; in fact the weight is brought back quicker than by the use of breast milk. At times it may be necessary

9. Journal A. M. A., 1910, IV, 1455.

to add a second carbohydrate in the form of wheat flour, 1 to 2 per cent. being about the proper amount. Frequently the formula of DeMattos given below meets all the requirements.

In ordering these sick infants with serious disturbances of nutrition to be wet-nursed, to be successful a special technic is required. To place one of these sick infants on a full breast would be followed by dire consequences. We must not forget that breast milk also contains a carbohydrate which may bring about an intoxication. The fat may also be harmful. When a marantic infant is placed on the breast there is usually a loss in weight, then for two or three weeks a stationary weight, and then the gain in weight may begin if the injury to the infant's organism has not been too severe. This is most valuable knowledge as otherwise the parents will demand a change in nurses, believing that the nurse's milk is not of a satisfactory quality. In the early days of breast feeding in a serious case, excellent results will be obtained if we begin with an ounce of breast milk in twenty-four hours which is gradually increased if no untoward results arise. To complement this, I prefer to feed a mixture composed of one-half acidified milk<sup>10</sup> and one-

10. Brady: *Archiv. Pediat.*, June, 1910.

half barley water with one grain of saccharin to a quart of the mixture. As the breast milk is increased the amount of the artificial feeding is decreased. Besides repairing the injury of the tissues, breast milk increases the tolerance for carbohydrates and we find in the course of time a larger percentage of carbohydrate will be tolerated than before the commencement of breast feeding. Some marantic infants, especially over eight months, though receiving nothing but the breast, absolutely refuse to gain. They are fairly comfortable and do not lose in weight; but no matter how long wet-nursing is continued, no progress is made. The only way a gain can be accomplished is by administering one artificial feeding with a fairly large percentage of carbohydrate. For this purpose the formula of DeMattos answers admirably: buttermilk 1 quart, flour 1 tablespoonful, cane sugar 3 tablespoonfuls, cooked twenty minutes with constant stirring. It is better to proceed cautiously and add only 1 tablespoonful of sugar which may later be increased. As the infant improves, the breast feeding may gradually be displaced by artificial feedings, ever mindful of the fact that a relapse in the form of an intoxication may ensue if the percentage of sugar is increased too rapidly.

The following case I cite at some length to illustrate some of the points made in the above article:

#### REPORT OF CASE

Baby M., born Aug. 31, 1909, of healthy parents, weight 8 pounds and 4 ounces, nursed at the breast. At 4 weeks weighed 9 pounds and 2 ounces. Baby began to be uncomfortable and suffer from constipation. At the fifth week baby was so uncomfortable that the attending physician advised a temporary suspension of breast feeding; condensed milk was substituted.

This was continued for two days with no improvement. Oatmeal was then prescribed with castor oil for the constipation. For four days baby screamed and vomited; rice water was then ordered with an interchange of three minutes of breast feeding. Baby was gradually returned to exclusive breast milk. Castor oil was given every day for constipation. At eleventh week, weight 10 pounds and 10 ounces. For some unknown reason baby again became sick with vomiting, screaming, and curdy mucous stools. Oatmeal water ordered, weight dropped in a few days to 10 pounds and 3 ounces. Breast milk gradually again resumed. Baby well, gaining in weight but still obstinately constipated; castor oil given every day. Baby did beautifully until February 6; perfectly comfortable the entire time, weight 14 pounds, age 5 months. For the next ten weeks there was no gain in weight; during this time she was off and on comfortable and uncomfortable and fretful. In order to promote the weight barley water was ordered with the breast milk. In one week there was a loss of 8 ounces. The next 4 weeks cow's milk in various dilutions with barley and oatmeal in conjunction with the breast was ordered. No improvement; infant ordered weaned; age 9 months, weight 13 pounds and 2 ounces; this milk formula prescribed: 4 ounces from upper third quart bottle of milk, 15 ounces boiled water, 1 ounce lime water and 1 ounce milk sugar. On this diet baby very comfortable and happy but gained no weight, very pale and constipated. During the next two weeks milk was increased in formula. Baby became sick; condensed milk then ordered which did not bring about improvement; weight dropped 17 ounces. The next three weeks mixtures of cream, oatmeal and condensed milk were tried with only temporary improvement. At 10 months, weight 12 pounds and 4 ounces. Horlick's milk was then given; she immediately became more comfortable which lasted a week. Owing to no gain in weight, malted milk was increased. This was followed by a high fever, 105 degrees, and a severe diarrhea, which continued three weeks. Weight at 11 months 11 pounds. Modified milk next tried which resulted after one week in a loss of 8 ounces. Next on the list was Mellin's food prepared according to directions on the bottle for a 4-months-old infant. Immediate improvement, there was a gain in 10 days of 1¼ pounds. She seemed well and happy. In order to overcome the constipation, Mellin's food was increased. Baby responded with fever, diarrhea and loss in weight. On August 24, baby brought to the city and placed under my care. Weight 11¼ pounds, age 1 year lacking one week. On examination I found an atrophic infant the condition rapidly approaching marasmus. There was a distressed look on the face, eyes were sunken, skin pale, and in places owing to loss of normal fatty cushions hung in folds. Baby very peevish and fretful; lungs and heart normal, spleen not palpable, liver palpable 2 cm. below free border of ribs, bowels costive, no evidence of syphilis or tuberculosis. Diagnosis, dyspepsia and malnutrition.

In reviewing the above history we notice there was a period of several weeks in which the infant did beautifully on the mother's milk and gained regularly in weight up to 14 pounds and 2 ounces at 6 months. Why the baby then began to be restless and lose in weight I am unable to say. Every day for weeks the baby received a dose of castor oil; this, no doubt, was not without some harm to the infant's organism. It is apparent from the history that the baby's tolerance for sugar was low as she had sickened on condensed milk, showed a temporary improvement on Horlick's milk and Mellin's food, followed by illness and loss in weight. In July after the feeding with malted sugar she took sick with high fever,



followed by a severe diarrhea, which lasted three weeks. This beyond a doubt was an intoxication from feeding an excessive amount of sugar. Owing to the atrophic condition a high or even a moderate percentage of fat was contra-indicated. The following prescription was ordered: Fat 0.5, proteid 1.75, carbohydrate (flour and maltose) 1.00; 4-ounce feedings at three and one-half hour intervals. Infant immediately became better and gained 8 ounces in eleven days. The improvement was only temporary, infant again became restless and lost weight. Sixteen days of artificial feeding convinced me that the infant's tolerance for carbohydrates was so low that breast milk was absolutely necessary. The mother was told that in the beginning there would probably be a loss in weight, followed by a stationary period and ultimately a gain in weight would be expected. An infant this old will not take the breast, so it was necessary to milk the breasts and feed with a bottle. First day baby received 12½ ounces breast milk supplemented by skim milk and barley water; no sugar. This was followed by a loss of 8 ounces in three days. Then followed a gradual improvement; breast milk was gradually increased to four feedings of 6 ounces each, two wet nurses being employed. After one month and ten days of breast milk infant had gained 1½ ounces. In every way the baby seemed better, sleep was better and baby seemed very happy. Six weeks after beginning the breast milk the four feedings of breast milk were supplemented by one 7-ounce feeding of buttermilk, flour and cane sugar (DeMattos formula) in order to bring about an increase of weight. Infant was entirely comfortable and after seven weeks had made a gain of 2 pounds and 14 ounces or about an ounce a day. At the end of eleven weeks an attempt was made to displace one-half of a breast feeding for one-half of a feeding of buttermilk-flour mixture. Infant immediately became restless and lost weight, showing that the carbohydrate tolerance was still low. A return of the original diet was made which was followed by prompt improvement. A recent letter from the mother dated March 22 stated baby weighed 18 pounds and 12 ounces; the age then was 1 year and 7 months. There is no doubt in my mind that this patient's nutrition is definitely established and no further trouble need be feared.

1467 Union Avenue.

#### TREATMENT OF PNEUMONIA IN ADULTS \*

H. A. KILLIAN, M.D.  
PORTAGEVILLE, MO.

The first thing to do is to forget that this is a general disease in which there may be great disparity between the local signs and the patient's general condition, severe cases some-

times giving evidence of but slight lung involvement and *vice versa*; and in my opinion the attempts to devise a specific treatment have not been successful. But little is to be expected in this direction, for the pneumococcus is not always a constant quantity; and various other organisms including the influenza bacillus, which has markedly influenced the disease, may be present in mixed infections.

When treatment is instituted we must first be guided by the fact that we are not treating pneumonia, but a patient with pneumonia. My detail discussion of the treatment is subdivided under the following heads:

1. To maintain life the careful management of the stomach by suitable diet to prevent distention and the consequent cardiac embarrassment is of the highest importance. Too many, both nurses and doctors, allow their patients to eat too much of things they should not have and of things they should have. I deem it much wiser to give too small an amount of food than too much; to avoid all carbonated beverages; to watch the temperature of the sick-room that it be not too cold nor too warm. By so doing you will add greatly to the comfort of the patient.

2. To support the heart; the best drugs for this purpose are strychnin, caffeine, alcohol, digitalis, camphor and adrenalin. If prompt results are not obtained the most of these drugs should be given hypodermically and in sufficient amounts to exert their physiologic action. Views as to too large doses of digitalis are still divided. The precordial ice-bag, venesection and cupping are useful measures in some instances.

3. To control hyperpyrexia, large flat ice-bags on the chest will be found useful, but care is necessary to avoid producing intercostal neuritis. Cold sponging and packs are also of value but must be used with caution. I think cold baths are contra-indicated, and the rational use of some of the cold tar antipyretics in small doses may contribute much to the patient's comfort.

4. To relieve suffering, the cough and pain are combated by small doses of morphin, hypodermically, or of heroin hydrochlorate. I find also that the Paquelin cautery is of great value in the pleuritic stitches. Every effort should be made to secure as much rest and sleep for the patient as possible, and every effort should be made to control complications, such as pleurisy with effusion, empyema, pericarditis, endocarditis and many other things that might arise.

So treat the symptoms as they arise. If pneumonia be regarded as a constitutional malady with a local lesion, then the consolidated lung no more calls for treatment than does the intestinal ulcer of typhoid fever, but the general condition of the patient is to govern you in the management and not so much the local changes in the thorax.

We must treat these symptoms as they arise; not the pneumonia, but the patient with pneumonia.

\* Read by title in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

OCTOBER, 1911

### EDITORIALS

#### DR. WATERMAN IS A MEMBER OF THE ASSOCIATION

Just as we are going to press we learn that in our September issue we unwittingly did an injustice to Dr. J. A. Waterman and to Governor Hadley by stating that Dr. Waterman, recently elected Superintendent of the Farmington Hospital for the Insane, was not a member of the Association but had the support of Governor Hadley for the position. The error was due to a clerical blunder in filing membership cards. It is deplorable and we regret that it occurred. Dr. Waterman is a member of the Caldwell County Medical Society, the State Association and the American Medical Association. We are glad to make the correction.

In our next issue we shall have something to say concerning the excellent results of Dr. Waterman's work as prison physician and of the encouraging outlook for his administration at Farmington, of which we have just recently been apprised. Lack of space will not permit us at this time to do more than correct the misstatement concerning Dr. Waterman's membership in the Association.

#### DR. WILEY VINDICATED

President Taft has completely vindicated Dr. Wiley who was recently charged by the officials of the Department of Agriculture and the "personnel board" with a technical violation of the statutes and his dismissal recommended. His alleged offense consisted in employing an expert chemist at a salary in excess of the amount permitted by law. An investigation by a committee of the House of Representatives proved the falsity of the charges, and the President, to whom was submitted the result of the investigation, has decided in Dr. Wiley's favor at every point and praised his work in high terms. The President furthermore administered a rebuke, though in mild terms, to the Secretary of Agriculture and the Attorney-General, both of whom have been inimical to Dr. Wiley and his pure food crusade. In concluding his letter transmitting his decision to the Secretary of Agriculture, the President says:

"The broader issues raised by the investigation, which have a much weightier relation than this one to the general efficiency of the Department, may require much more radical action than the question I have considered and decided."

This expression is generally interpreted as meaning that the Department of Agriculture will receive a general overhauling in the near future. It surely needs cleaning out if we are to judge of the necessity for such action by the restrictions placed on many of the recommendations of Dr. Wiley in his efforts to stop the sale of impure food and drugs. We will hope at any rate that the investigation of the entire department will be instituted, thoroughly and honestly conducted, and the light of publicity shed on its internal management. The people have a right to know, and should demand information on the workings of this department since its functions have such an intimate relation to the preservation of the health of the nation.

The conservation of the public health is coming to be seriously regarded as a real function of the government, especially of the Department of Agriculture, and every person connected with that service should be an enthusiastic supporter of this doctrine so that adulteration of food and drugs, misbranding and deception of all kinds in the manufacture and sale of food and drugs will be condemned and the perpetrators of frauds properly punished. We are convinced that such an investigation will emphasize the importance and need of establishing a Department of Public Health.

#### PEDAGOGICAL PECULIARITIES

The object of institutional education is to fit the student in the largest way for his participation in the affairs of his community. It has to do in a large measure with the shaping of his personality, with qualifying him to assume the responsibilities that will devolve on him as a member of society and as a citizen.

When an educator possesses that which enables his students to feel themselves safe in regarding him as a monitor, confident that in him they have an argument for their opinions and justification for their acts; when he is a living epistle which they may know and read with the assurance that what they glean there will not have to be unlearned later on; when he has the calmness of judgment to enable him to see the effects of his opinions on his pupils as those opinions find expression in his life as well as in his words — then, other things being reasonably equal, that man is in a fair way of accomplishing the purposes whereunto he has been called. But when an educator injects false and erroneous ideas into the minds of those whom it is his province to train; ideas, for instance, that challenge the sincerity of methods undertaken and maintained



by the government for the protection and security of the people; when he depreciates measures established by the authorities solely for prevention of certain evil conditions that might be expected to appear without such precautions; when for no valid reason other than that prompted by the whim of the moment he allows himself to be quoted as having said that certain procedures having to do directly with the public health are "farcical," then he does despite to the traditions of his profession and falls short of the mark of his high calling.

The St. Louis pedagogue who recently said, or permitted himself to be quoted as having said, that the custom of compulsory quarantine as enforced by the authorities at the port of New York is "farcical," has grievously erred; and because of the prestige enjoyed by him as an accredited teacher and as a gentleman occupying a prominent place in the community, has brought into more or less contempt a system which the government operates solely for the purpose of preventing the invasion of contagious and epidemic diseases from foreign countries.

As a teacher of youth the pedagogue's responsibilities toward his pupils and toward the community do not cease when he leaves the school-room. It is continually incumbent on him as an instructor to conduct himself at all times in a manner calculated to encourage habits of lucid judgment and calm discrimination in the minds of those who by reason of the mutual relation instinctively regard him as a safe person to emulate.

Our public men should be more circumspect when the safeguards thrown out by the authorities for the security of society are under discussion. If the measures seem to them inadequate or unnecessary and they can suggest a better way let us have it; but pure iconoclasm with no attempt nor apparent desire to provide a substitute is neither commendable nor becoming in men whose attainments have raised them to a position where they may claim something of the attention of society.

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### TYPHOID VACCINATION

Major General Wood of the United States Army has recently issued an order requiring compulsory antityphoid vaccination of enlisted officers and men under 45 years of age. This is the practical result of persistent scientific investigation to discover a method of preventing a scourge that annually snuffs out thousands of useful lives.

Antityphoid vaccination has been growing in favor with army authorities throughout the world since 1896, when Sir A. E. Wright, then of the Royal Army Medical College at Netley, England, gave the method a practical try-out among the troops in India. At the same time Prof. R. Pfeiffer and Dr. W. Kollme of Germany were

pursuing similar researches, their methods being substantially the same as Wright's. For several years prior to 1896 desultory contributions to the literature of this subject appeared, together with laboratory determinations, but the practical work was done on the largest scale by the three men above mentioned.

The year 1898 saw prophylactic vaccination officially introduced into the Army in India, due almost entirely to the labors of Wright, and during the Boer War he introduced the procedure among the troops engaged in that conflict. The figures showed that 266 cases of typhoid fever with thirty-nine deaths occurred among 19,069 soldiers who had been inoculated, or 12 per cent. of cases and 13 per cent. of deaths; while among 150,231 untreated men there were 3,739 cases, or 25 per cent., with a death-rate of 25 per cent. These statistics were questioned; and owing to confusion of figures and uncertain returns from several stations the practice was suspended during 1902. Some time later it was reintroduced, the credit for this being due to Col. Leishman, R.A.M.C., who worked out some modifications in the vaccine and brought up to an efficient point the method of tabulating statistics.

The results following the German adoption of the procedure in Southwest Africa in 1904 and 1907 were not less encouraging than Wright's. It was used among the United States troops assembled lately on the Mexican border, where climatic conditions were unusually favorable to typhoid development and only one case occurred among some 15,000 men. This was a revelation to government authorities and confirmatory of the opinion of investigators along this line of the efficacy of this method of prophylaxis against typhoid. It is probably due to this fact that we have the recent order regarding compulsory antityphoid vaccination of enlisted men in the Army.

From many quarters have come expressions of belief that the method will be equally efficacious in civil populations. The procedure is all right and the obstacles in civil practice will probably arise from the fact that the best results call for several inoculations, since the period of immunity extends in most instances over a time that compared with small-pox prophylaxis is comparatively short. Let the people once come to a full realization that the scourge of typhoid can be prevented, and of the significance of even temporary immunity by vaccination, then we may expect its general introduction in civil practice and a far greater reduction in the number of cases and deaths than was observed following the purification of the water-supply of populous centers.

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### EUTHANASIA

The attitude assumed toward euthanasia by some contemporary reformers as interpreted in the columns of recent newspapers reminds us of the Greek sophists and certain of the brain

teasers with which they were wont to amuse themselves on dull days.

There was one old fellow who figured out that it was impossible for a man to walk or move in space. The story is familiar to all and we will not go into the minutiae of the narrative further than to notice that he succeeded in proving, so far as syllogisms go, that it would be easier for the heavens to fall than for one of his auditors to move or walk in space. The ancient philosopher silenced the arguments of those who were foolish enough to disagree with him and convinced the skeptics so completely that there was no longer any doubt about the matter in their minds. What they proposed to do about the remarkable thing that had thus for the first time been shown to them and had escaped their observation before, is not recorded. It is important for us to remember only that this ancient Greek proved absolutely that no man can walk in space—and then proceeded to dumfound the little group gathered around him on the green by walking off to dinner!

The attitude of the euthanasian is comparable to the ancient Greek philosopher. As a question discussed on paper or argued by some debating club it is all very pretty and calculated to cause our manly breasts to heave with sympathy for the afflicted and the desire to alleviate their misery, but commendable as these sentiments may be, the doctrine will not stand the test of execution.

We do not think our euthanasian friends have met with the same success that waited on their argumentative predecessor, but their attitude is as reasonable as his and the question they have undertaken to solve is every whit as practicable.

Of course every human being would desire to see the miserable put out of their misery and the incurable released from the chains that torture them; but the intricacies that attend the solution proposed by these philanthropic people take on proportions that are too deep for hope of success.

In dealing with a question of this nature it is important to remember that the world is built on a moral foundation and that suffering and pain have their part in the system; that it is one thing to lessen the acute suffering of a fellow-being through the employment of proved remedial agents, and quite another thing to hurl a man into his Creator's face simply because certain natural laws have operated after a fashion that does not meet with our approval.

The sad case of complete imbecility cited by a St. Louis physician should not be interpreted as a reason for destroying the lives of unfortunates so afflicted; rather should it be accepted as a stimulus to discovering the cause of this phenomenon and the means of preventing its recurrence in future. Deformities and imperfections from the standpoint of natural law are not deformities and imperfections but perfect consequential oper-

ations of the law. One law operating naturally brings about what to us seems a perfect consequent; another law results in hideous deformities; but the operation of the latter law is as natural as the operation of the former law and from the standpoint of the law itself is a perfect work. A law is non-moral, blind. In its operation certain causes come into play that bring about unseemly results. It happens that we are not familiar with these causes, that is all. It would be more human to search out those causes and the remedy for those conditions than to resort to a "slaughter of the innocents."

Fifty years ago the blind and the deaf-mute would have been considered fit subjects to receive the benefits of the benevolence of the euthanasians, but to-day the condition of the deaf-mute is far from desperate and we know most cases of blindness are preventable. The same reasoning applies to the rest of the so-called malformations of mind and body; they are after all simply the consequences of antecedents which it is our business to correct.

But putting aside for the moment these considerations, the scheme presents tremendous obstacles when we set about its application. One of the defenders of the plan has been quoted as saying that the obstacles constituted no valid reason for rejecting it. We think the gentleman was misquoted; at least we hope he was.

How shall we decide who is to be executed? Obviously the consent either of the patient or of his relative whose heart has been wrung by long vigils at the bedside of the beloved counts for *nil* (we dismiss as unworthy the suggestion that the relative may have an interest in the last will and testament of the unfortunate whom we are about to send to glory), and we know that the diagnosis of a man's ultimate value to the community may be erroneous. There was once a deaf musician whose creations are the everlasting glory of the age and there once lived a blind poet whose masterpieces helped shape the language of generations; and there are others. It would be manifestly unfair to single out a few diseases at the expense of sufferers from the rest.

If euthanasia must be the fashion, and if the gentleman referred to above was not misquoted and it is a consummation devoutly wished by him despite the obstacles involved, then we see no alternative but the inclusion of every ailment that brings a moan to the lips or a frown to the brow. Strange that our euthanasian friends have not suggested this. Let them begin with the practice first at home; it may be that after we have seen it work we will approve; but at present we must confess we are skeptical about it.

After meditating along these lines we are forced to conclude that nobody intends euthanasia should be taken seriously, and we believe furthermore that if there were the remotest likelihood of its being so taken there would be an immense



and universal calm on the part of the loudly insistent philanthropists for whom obstacles have no terrors and no meaning.

Let us rather turn our attention to some saner theme. Eugenics is a field that offers much to the ambitious. Let us go after that and dismiss this monumental absurdity.

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### A CORRECTION

Our attention has been called to the statement made in the councilor's report for the ninth district that no member of Montgomery County excepting the secretary had paid dues. This was an error, as three other members had paid and two more have remitted since the annual meeting. We regret the occurrence very much and are glad to make apologies to the members of this society.

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### EDITORIAL NOTES

THE Missouri Association for the Relief and Control of Tuberculosis, 625 Locust Street, St. Louis, will conduct the Red Cross Seal sale in Missouri and is planning to sell 3,500,000 seals. The proceeds will go to buy an exhibit showing "How Tuberculosis is Communicated, Prevented and Cured." The Association hopes to take this exhibit to every town in the state of Missouri and to give free stereopticon lectures in connection with it. Last year through generous contributions of almost \$2,000 raised in St. Louis, the Association was able to carry on a campaign against consumption by means of an exhibit in a special car. The car was loaned by the Frisco Railroad and carried free over the lines of the Frisco and Katy Railroads, and also over a part of the Missouri Pacific and Cotton Belt railroads. Over sixty towns were visited and 30,000 people saw the exhibit.

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NEWSPAPERS, civic organizations and citizens of St. Louis have become greatly aroused over the milk-supply owing to declarations by the state food and dairy commissioner that the milk-supply of St. Louis is to a large extent the product of insanitary, ill-kept and filthy dairies in and around the city. The city chemist, however, maintained that the city dairies were in fairly good condition. Investigation rather startled this official, who has only two inspectors, and he joined forces with the state commissioner for a general clean-up of the dairies. The first result was the destruction of 328 gallons of formal-dehyded milk and the prosecution of twenty-nine

dairymen for selling impure milk. In fining three of these offenders the court declared the practice of selling impure milk was worse than murder; the other cases were continued. At the City Club on September 13, Dr. John Zahorsky, Mr. William Bedal, an attorney, and Mr. Theodore Lange, a milk dealer, discussed the subject from different viewpoints. Dr. Max Starkloff, city health commissioner, also spoke. The result of these efforts for a pure milk-supply for St. Louis showed that little had been done in this direction owing to legal complications; but the crux of the situation was well stated by both Dr. Starkloff and Mr. Bedal, who maintained that the only effective method of securing good milk for the city was to establish a system of licensing dairies by the board of health, such license to be revocable by the board. At present, action against refractory dairymen can be had only by the tedious and utterly inadequate procedure of prosecution in the courts. An ordinance is being prepared giving the board of health authority to license dairies.

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### CORRESPONDENCE

#### UNIVERSITY MEDICAL COLLEGE

*To the Editor:* In all probability you have noticed in the daily press an account of the reorganization and continuance of the University Medical College located here in Kansas City and what our college expects to do in the future. Briefly, I would say that the U. M. C. has and is making alliances with universities and colleges throughout the country whereby she will depend on these colleges and universities for the first two years' work of a regular medical school and admit their students for the completion of their medical course, namely, the ordinary work of the junior and senior classes. In addition to this, we have arranged to give special work in bacteriology and pathology. Besides we shall have the giant magnet, radium and x-ray equipment. It is our purpose in the near future to require of our students one year of practical work in a hospital, making our course one of five years. We will have three semesters of three months each for the undergraduate and twelve months for the postgraduate.

We have seen the officers of both the American Association of Medical Colleges and a committee of the American Medical Association, as well as the State Board of Health of the State of Missouri, who approve and endorse our plan. It is our purpose to make the school of the highest possible order and so assist in the elevation of medical science.

Most Respectfully,

FLAVEL B. TIFFANY, President.

## NEWS NOTES

DR. LOGAN CLENDENING of Kansas City, who has been abroad during the summer, returned home on September 14.

PIKE County Medical Society has adopted a new schedule of fees. The charges for services have been increased and the members have agreed to adhere to the new rates.

DR. A. C. CRANK, formerly of Warrensburg, Johnson County, has moved to Canton, Lewis County. Dr. Crank was a member of the state legislature from Johnson County in the 1911 session.

THE medical department of Tulane University of Louisiana will inaugurate a department of tropical medicine, hygiene and preventive medicine beginning October 1. The new department will be in charge of Professor Creighton Wellman and a staff of assistants.

THE following have been appointed delegates to the National Conservation Congress, which convenes in Kansas City, September 25-27: Drs. D. C. Gore, Marshall; C. Lester Hall, Kansas City; M. P. Overholser, Nevada; N. P. Wood, Independence; E. J. Goodwin, St. Louis.

MISS SUSAN LAWRENCE DAVIS was arrested by the health authorities at St. Louis charged with holding out as a physician. She declares that she is not violating the medical practice laws because she simply "instructs people how to cure themselves." Water is her panacea for all ills, it is said, including hookworm and tuberculosis.

THE Missouri State Sanatorium for Incipient Tuberculosis has issued a booklet, with a foreword by Governor Hadley. The book contains sixteen pages of miscellaneous information calculated to help extend knowledge among the people of the means for preventing and relieving tuberculosis. Copies may be had by addressing the superintendent at Mt. Vernon.

DR. H. I. OWEN of Fulton has been elected physician to the Missouri School for the Deaf. Dr. Owen is a graduate of the Barnes Medical College, 1901, and has been in practice in Fulton since 1904. He is a member of Callaway County Medical Society, the Missouri State Medical

Association and the American Medical Association, and is well qualified to fill this important position.

BARNES University, St. Louis, according to an announcement made to the alumni at a banquet recently, is now free from debt. Dr. C. H. Hughes renews his affiliation with the institution and is president of the board of trustees. Rumors of the absorption of the American Medical College and the College of Physicians and Surgeons have been revived but no definite information was given out on this subject.

DR. A. H. MYERDICK of St. Louis has been appointed physician at the penitentiary in place of Dr. J. A. Waterman, recently appointed superintendent at Farmington Hospital for the Insane. Dr. Myerdick is a graduate of the medical department of Washington University and a member of St. Louis Medical Society and the State Medical Association. For a number of years he was connected with the health department of St. Louis.

SEVERAL physicians in St. Louis have been robbed by a sneak thief who, declaring himself to be a country physician desirous of witnessing operations, would be given the freedom of the hospital and privilege of attending operations. He would leave the operating room before the physicians finished and pilfer money and valuables from their clothing. Physicians at University Hospital, St. Mary's and St. Anthony's have been victimized in this manner.

THE third edition of the American Medical Directory will be ready for distribution early in 1912. The information contained in this edition has been obtained from official sources. It will give data including county, state and A. M. A. membership, concerning physicians in the United States, Canada, Hawaii, Porto Rico and the Philippine Islands; a list of hospital sanitariums, medical colleges, medical libraries, etc., in each state; membership in special societies, and much other valuable information. If ordered before January 1 the price will be \$6; regular price \$7.

MAYOR KREISMAN has taken a hand in the hospital muddle at St. Louis and has promised that the hospital board shall receive \$1,500 monthly additional to the present appropriation for food for patients. The disclosures following an investigation by a committee of the House of Delegates has aroused the people to the needs of the hospitals. It is probable that the internal management of these institutions will see consid-



erable improvement; it has always been bad, but the visiting staff system of treating patients has proved far superior to former methods. In addition to the extra money for food, provision will be made for student and graduate nurses and the number of nurses increased and dietetists employed at the city hospital, infectious diseases hospital and Robert Koch hospital for tuberculosis.

## SOCIETY PROCEEDINGS

### ADAIR COUNTY MEDICAL SOCIETY

#### MEETING OF JUNE 1

The Adair County Medical Society held its regular monthly meeting on Thursday, June 1, in Novinger, at the office of Dr. J. S. Gashwiler with the following members present: Drs. Butler, Callison, Gashwiler, Hanks, Quinn and Martin. Dr. Deyer was present as a visitor.

The meeting was called to order by the president at 1 p. m. The secretary being absent, Dr. Martin was appointed to act in that capacity. Owing to absence of the records, the minutes of the previous meeting were omitted.

The Committee on Free Clinic reported progress and promised a full report at the next meeting.

Dr. Gashwiler presented a case of advanced pulmonary tuberculosis.

Dr. Hanks presented a case of suspected tuberculosis, two Moro tests having been made, one positive and the other a slight reaction. The case was examined and the diagnosis was discussed.

Dr. Gashwiler read a paper on "Minor Surgical Injuries."

Discussion followed by all members.

Society adjourned.

J. W. MARTIN, M.D., Acting Secretary.

#### MEETING OF AUGUST 4

The Society met on Thursday evening, August 4, in the office of the secretary with the following members present: Drs. E. S. Quinn, J. S. Gashwiler, J. W. Martin, A. W. Parrish, T. R. Butler and B. B. Parrish.

The minutes of the June meeting were read and approved.

The Committee on Free Clinic reported not ready and were given further time with instructions to report at the September meeting.

Dr. C. M. C. Willeox presented his application for membership in the Society and upon motion it was tabled to next meeting.

Dr. T. R. Butler resigned as a member of the board of censors, on account of going away.

The time was taken up with discussions and the scientific program dispensed with.

The society adjourned to meet in the office of Dr. T. R. Butler on first Thursday in September.

#### MEETING OF SEPTEMBER 7

The Society held its meeting on Thursday eve, September 7, in office of Dr. C. S. Wilson, Kirksville.

The following members were present: Drs. Wilson, Martin, A. W. Parrish, Quinn, Gashwiler and B. B. Parrish.

The Society had as a visitor Dr. Montgomery, of Milan.

The minutes of last meeting were read and approved.

Under the head of Motions and Resolutions the application of Dr. C. M. C. Willeox was taken up and

upon motion it was again tabled to the October meeting.

Dr. J. W. Martin was appointed censor to fill out the unexpired term of Dr. T. R. Butler who resigned.

A committee composed of Drs. Gashwiler, Wilson and Parrish were appointed to investigate and report on post-graduate study.

The Committee on Free Clinic reported unfavorably; the report was accepted and committee discharged.

The scientific program was next taken up and, in the absence of Dr. Butler, Dr. Wilson gave an interesting talk on "Chronic Otitis Media," which was discussed by all the members present.

Society adjourned to meet first Thursday in October.

BERT B. PARRISH, M.D., Secretary.

### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society held its regular meeting at Cape Girardeau, September 11, with the following members present: Drs. Hays, Hope, Howard, Schulz, Wilson and Yount.

Program for the evening:

"Colitis," by Dr. W. N. Howard.

"Dysentery," by Dr. E. H. G. Wilson.

The usual discussion followed the reading of the papers.

E. H. G. WILSON, M.D., Secretary.

### JACKSON COUNTY MEDICAL SOCIETY

#### MEETING OF SEPTEMBER 5

The Society met in the club room of the Coates House and listened to the following papers:

"Epilepsy—Prognosis and Treatment," by Dr. A. L. Skoog.

"Pasteur Treatment of Rabies with Report of 262 Cases Treated," by Dr. Verner Nisbet.

Dr. G. Wilse Robinson opened the discussion on the paper by Dr. Skoog and Dr. F. J. Hall opened the discussion on Dr. Nisbet's paper.

The following were elected members of the Society: Drs. Henry E. Thomason, Wm. W. Hobbs, John M. Rice and L. L. Russell.

Applications for membership were received from Drs. W. E. Cary, transfer from Buchanan Co. Medical Society, E. S. Stoffer, Geo. A. Graham and W. L. Hollister.

#### MEETING OF SEPTEMBER 19

This meeting was held in the club room of the Coates House. The Scientific program consisted of the following papers:

"Gastroecorrhea," by Dr. J. W. Ousley.

"Congenital Hip Dislocation," by Dr. Benj. Belove.

Dr. R. T. Sloan opened the discussion on Dr. Ousley's paper and Dr. J. D. Griffith opened the discussion on Dr. Belove's paper.

The application of Dr. Wm. J. Walker for membership was received.

The Society is contemplating raising the annual dues to \$10. If this is accomplished arrangements can be made to secure quarters for a permanent meeting place and library purposes free of rent.

### ST. LOUIS MEDICAL SOCIETY

The St. Louis Medical Society began its winter's work on Saturday, September 16.

The program follows:

Presentation of Patient: Pseudo-Hermaphrodite; Man or Woman, Which? Report of a Case of Pseudo-Hermaphroditism, by Dr. H. S. Crossen. Case Report of Defect of Left Ovary, Tube and Kidney, with Normally Developed Uterus, by Dr. George Gellhorn.

Hermaphroditism. Pseudo-Hermaphroditism and Differentiation of Sex, by Dr. Frank Hinehey.

Dr. Crossen was absent and his paper was postponed to another meeting.

Dr. Gellhorn's discussion of an unusual case was most interesting and apparently the condition was unique.

Dr. Hinehey's paper was an intelligent and conservative presentation of the much discussed question of hermaphroditism. The discussion on both papers was quite animated and gave evidence of the interest of the members in these subjects.

Dr. Goodwin reported for the delegates to the American Medical Association that the resolution adopted by this Society asking the American Medical Association to use its influence and enlist the assistance of other scientific bodies toward obtaining a reduction in the tariff now existing on scientific apparatus imported from foreign countries, had been presented to the House of Delegates by Dr. Funkhouser, and that the resolution was adopted. He announced also that the following St. Louis members had been elected officers in the various sections: Dr. Roger S. Morris, Secretary, Practice of Medicine; Dr. Adolf Alt, Chairman, Ophthalmology; Dr. Leo Loeb, Chairman, Pathology and Physiology; Dr. Virgil Loeb, Vice-Chairman, Stomatology; Dr. Martin F. Engman, Vice-Chairman, Dermatology.

The attendance at this meeting, the first since the summer vacation, evidenced the interest of the members in society work, there being 52 members present.

## BOOK REVIEWS

**PRINCIPLES AND PRACTICE OF MODERN OTOLGY.** By John F. Barnhill, M.D. Professor of Otolgy, Laryngology, and Rhinology, Indiana University School of Medicine, etc., etc., and Ernest deWolfe Wales, B.S., M.D. Clinical Professor Otolgy, Laryngology, and Rhinology, Indiana University School of Medicine, etc., etc. Second edition, thoroughly revised. 8 vo. pp. 598. illust. W. B. Saunders Co. Philadelphia & London. 1911. Cloth, \$5.50; half morocco, \$7.00 net.

This is a thoroughly practical book. The subject is well covered, and the judiciously liberal employment of illustrations greatly enhances the worth of the work. The book commends itself both to the specialist, and the general practitioner, by reason of its scope and thoroughness.

The chapter on the examination of the function of the ear has been rewritten. The statement regarding operative injury to the facial nerve has been extended. To this edition has been added a description of the "conservative" radical mastoid operation, and several paragraphs upon the symptoms, pathology and surgical treatment of labyrinth suppurative are also new.

**PROGRESSIVE MEDICINE.** Volume 3, September, 1911. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., Prof. of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. 8 vo. pp. 328 with 24 cuts, drawings, and illustrations. Per annum in four paper-bound volumes, containing over 1,200 pages, \$6.00 net. Lea & Febiger, Publishers, New York.

This number of Progressive Medicine presents the following contributions: Diseases of the Thorax and Its Viscera, including the Heart, Lungs and Blood-Vessels, by William Ewart, M.D., F.R.C.P.; Dermatology and Syphilis, by William S. Gottheil, M.D.; Obstetrics, by Edward P. Davis, M.D., and Diseases of the Nervous System, by William G. Spiller, M.D.

It is through the perusal of publications such as this quarterly digest that one becomes really cognizant of the progress that is being made in medicine throughout the world.

**HEART DISEASE, BLOOD-PRESSURE AND THE NEUHEIM-SCHOTT TREATMENT.** By Louis Faugeres Bishop, A.M., M.D. Clinical Professor of Heart and Circulatory Diseases, Firdham University, School of Medicine, New York City, etc., etc. Third edition. pp. 284. New York, E. B. Treat & Co. \$3.00.

A consideration of heart disease in connection with blood-pressure, together with the author's notes on the Schott treatment at Nauheim, and his observations and conclusions as to this treatment.

It is no longer necessary to journey to Bad-Nauheim in Hess to obtain the benefits of the Nauheim baths, as their chemical features can now be produced by artificial treatment of the water and their therapeutic action obtained at home.

The success of the other factors in the treatment of course depends largely upon the patient himself and his careful attention to the exigencies of his case as pointed out by the physician.

**CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION.** By Prof. Ed. von Neusser, M.D. Part III, Angina Pectoris. Authorized English Translation by Andrew MacFarlane, M.D. pp. 71. New York, E. B. Treat & Co. \$1.00.

This is the third of a series of monographs on disorders of respiration and circulation by Dr. Neusser, and deals with Angina Pectoris from the standpoint of Diagnosis, Differential Diagnosis, Etiology, Functional Forms of Angina Pectoris, Theories and Therapy.

In looking for the origin of the affection the author advocates the *Nerve Theory* which assumes that inflammatory processes of the cardiac plexus are responsible for the occurrence of the disease.

The general practitioner will find the book of great service.

**THE GULICK HYGIENE SERIES.** Book Five: Control of Body and Mind. By Frances Gulick Jewett. 12 mo. pp. 269, illust. Boston, New York, Chicago, and London. Ginn & Co. List price 50 cents.

This book meets with our enthusiastic approval. It is the fifth of a series of works on Hygiene suitable for children in the grade schools.

In this volume control in its relation to character and morals is discussed. The author endeavors to treat the subject from a scientific standpoint, urging simple experiments by the child; thus affording opportunity for active interest on the part of the pupil, and at the same time enabling him to grasp the practical force of the facts he sees illustrated.

The book lacks the faults so common to works of this kind, and presupposes intelligences and reasoning powers on the child's part. The volume fills a need long felt. The type is good, the cuts very numerous, and the binding is strong and serviceable and at the same time pleasing to the eye.

**THE BLUES (SPLANCHNIC NEURASTHENIA). CAUSES AND CURE.** By Albert Abrams, A.M., M.D. (Heidelberg), F.R.M.S. Consulting physician, Denver National Hospital for Consumptives, etc. pp. 285 illust. Fourth edition, revised and enlarged. New York, E. B. Treat & Co. 1911. \$1.50.

An interesting book which deals particularly with splanchnic neurasthenia, touching cursorily upon neurasthenia in general.

The author refers the origin of splanchnic neurasthenia to a congestion of the intra-abdominal veins.

The volume makes interesting reading. From its general tone it seems to be more appropriate for the layman than the graduate physician.



CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. Part VIII Gout. By Prof. Dr. H. Strauss, Prof. of the Third Clinic, Royal Charity Hospital, Berlin. Authorized American Edition translated under the direction of Nellis Barnes Foster, M.D. New York, E. B. Treat & Co. Price \$1.00. Octavo, pp. 70.

The author endeavors to give a concise portrayal of the modern view of gout, in the matter of its character and treatment, from the standpoint of the practitioner. Being a résumé of a communication on the pathogenesis and therapeutics of the disease which he published some years ago in the *Wuerzburger Abhandlung* this little volume is not intended to be exhaustive.

In this edition new matter has been added to the original contribution.

PLASTER OF PARIS AND HOW TO USE IT. By Martin W. Ware, M.D., New York, Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor of Surgery in the New York Post-Graduate School. Second edition revised and enlarged. Price, cloth, square form, \$1.25. De Luxe leather, \$2.50. Surgery Publishing Co., New York.

A commendable little volume on the Plaster of Paris bandage, surveying the subject from all angles; history, materials, manufacture, immediate preparation of bandages, application, removal, together with numerous other considerations.

The material for the subject-matter of the book is based on experience in dispensary practice of large joint disease and fracture service, extending over ten years, dealing with 5,000 cases.

This second edition has been revised and enlarged, with new drawings and marginal notes.

NEW AND NON-OFFICIAL REMEDIES. 1911. Containing descriptions of articles that have been accepted by the Council on Pharmacy and Chemistry prior to Jan. 1, 1911. Chicago: American Medical Association. Price, paper 25c; cloth 50c.

This is a hand-book of information regarding remedies that have been examined and accepted by the Council as conforming to the rules established for inclusion in the book. Physicians should have this book constantly on their desks as it will be found a source of valuable information concerning remedies that are worthy of their confidence.

HANDBOOK OF THERAPY. Cloth. Price, \$1.50. Pp. 421. Chicago: American Medical Association.

The Therapeutic Department in *The Journal of the American Medical Association* has been commented on so often and so favorably that the Association decided to reprint, in book form, the articles which seemed to be of most practical value to the general practitioner. Conditions governing therapeutic requirements are stated as clearly and concisely as possible. Special care has been taken to avoid unusual drugs, and with rare exceptions the formulas given are combinations which can be easily compounded by any pharmacist.

Besides the articles on therapy, the book contains a list of the articles accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies, as well as tables and compilations of miscellaneous data.

The book is of convenient size for the pocket or the satchel.

## BOOKS RECEIVED

A MANUAL OF MATERIA MEDICA. By E. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Octavo, 525 pages. Cloth, \$3.50 net. Lea & Febiger, Philadelphia and New York. 1911.

DISEASES OF THE STOMACH. With Special Reference to Treatment. By Charles D. Aaron, Sc.D., M.D., Professor of Gastro-enterology and Adjunct Professor of Dietetics in the Detroit College of Medicine; Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine, etc. Octavo, 555 pages, with 42 illustrations and 21 plates. Cloth, \$4.75 net. Lea & Febiger, Philadelphia and New York. 1911.

## CATALOGUE ST. LOUIS MEDICAL LIBRARY 3525 Pine Street

(Continued from page 134)

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(To be continued)

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### ORIGINAL ARTICLES

#### A REPORT OF THE PREVALENCE OF INFANTILE PARALYSIS IN MISSOURI \*

ARCHER O'REILLY, M.D.  
ST. LOUIS

In the last few years the medical and the lay press have been filled with reports of cases of infantile paralysis. Our knowledge of the etiology, pathology and the modes of transmission of this disease has been greatly advanced by the work of Flexner and others. As a result of newspaper exploitation a wide interest has been created throughout the country, which, in some places, has reached almost a state of dread. Last summer the eastern papers were filled with reports of epidemics throughout the country. We have also scientific reports of recent epidemics in Massachusetts, New York, Nebraska, Iowa, Kansas and many other states. These reports are more numerous than in former years; the epidemics also are larger and more extensive.

I wished to learn something of the prevalence of anterior poliomyelitis in Missouri and whether it was on the increase in this state. With this object in view I wrote to the secretary of the Missouri State Board of Health asking him if there were any statistics on hand which would answer these questions. I was informed by him that no such statistics existed, but he hoped in the near future to be able to publish a report of the mortality. Up to the present time this has not been made. I was also led to believe that the disease was becoming more common by the increased number of acute cases seen in the orthopedic and neurologic clinics of the St. Louis Children's Hospital. As I could not obtain any official data, I undertook this investigation.

Realizing that it was advisable to get answers from as many men in the state as possible, I felt that this could be best accomplished by sending out a list of questions which was not too volu-

minous and which could be answered without much difficulty. Besides, as this was a pioneer effort it seemed more important to get statistics as to the number and distribution of cases rather than to attempt to go too deeply into the pathology and epidemiology. With this object in view I wrote a circular letter to all the members of the Missouri State Medical Association, explaining the object of the investigation and enclosing a list of eleven questions which I requested them to answer and return to me. The questions were as follows:

1. How many cases of infantile paralysis have you seen in the last five years up to Jan. 1, 1910?
2. How many cases since Jan. 1, 1910.
3. Do you believe the disease is becoming more prevalent in your neighborhood?
4. Have you seen any cases of flaccid paralysis following acute illness in which the paralysis grew better and which were not diagnosed as infantile? If so, how many?
5. Have you seen any cases of flaccid paralysis, accompanying or following rheumatism, teething etc.? If so, how many? Did the paralysis get better?
6. Were any of the above cases fatal?
7. If so, was there an autopsy and what were the findings?
8. Do you know of this disease being epidemic at any time in your neighborhood, or throughout the state? If so, please give date, location and number of cases if possible?
9. In your cases have you any idea as to the cause of the disease?
10. Have you any idea as to how it was transmitted?
11. Will you give any other details which you think would be of interest or of value?

The first three questions explain themselves: the fourth and fifth were put in to cover those cases in which the wrong diagnosis might have been made. The other questions also explain themselves.

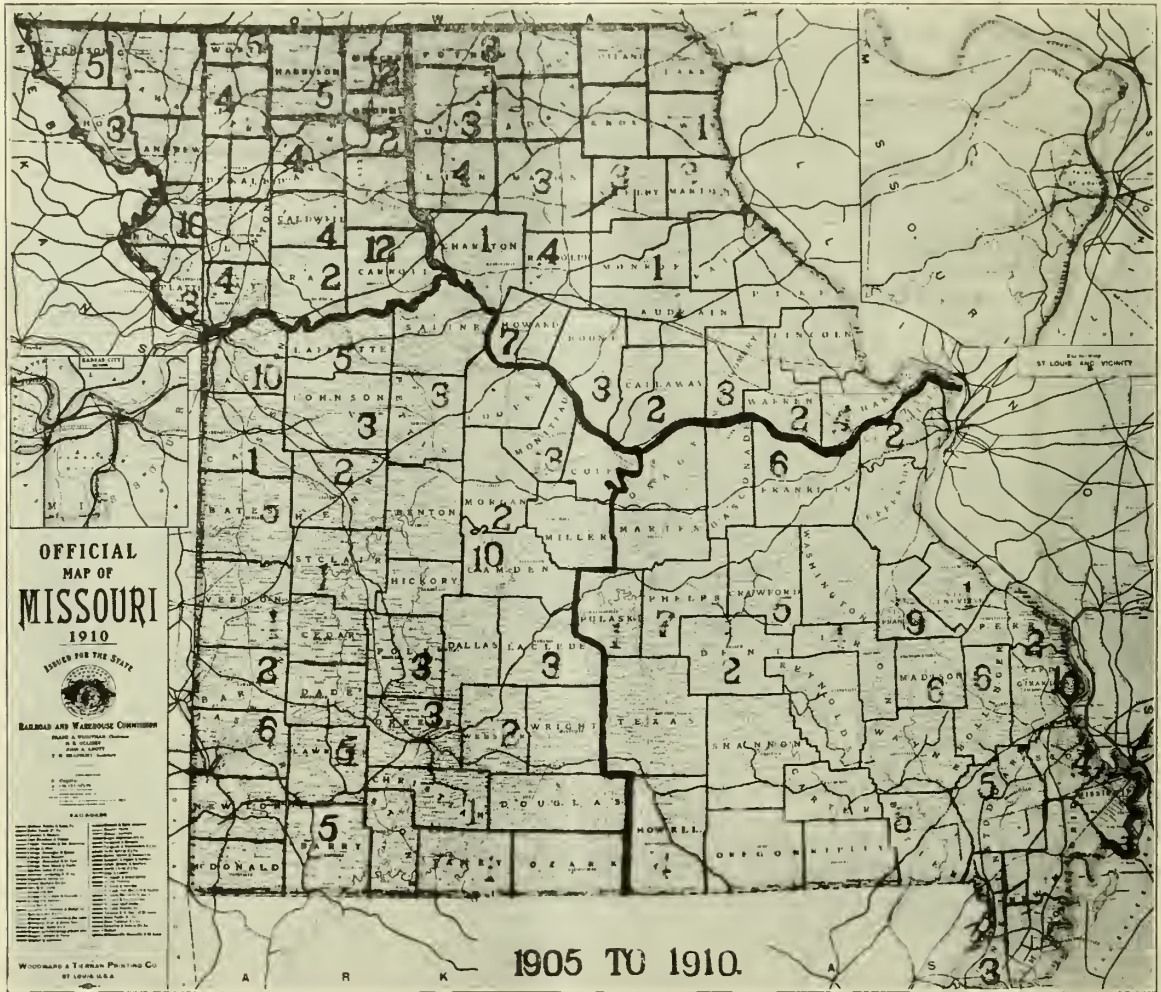
The answers to these questions indicated a large number of cases and led me to fear that there were a number of duplicates. For this reason a second list of questions was sent to all those who had reported cases in answer to Nos. 1 or 2. There were six of these questions as follows:

\* Read before the American Orthopedic Association (by invitation) May 17, 1911.



1. Name or initials of first, middle and last name of cases of anterior poliomyelitis and dates when first seen.
2. Were any of the cases seen in consultation? If so, with whom?
3. Were any of the other children of the family sick at the same time?
4. Did the patients live in town or in the country?
5. Did the patients live on a railroad?
6. Did the patients live on an electric or an inter-urban line?

list of cases, and that on the whole these physicians were more prominent and active in medical work. In reply to these 3,000 letters I received 1,106 answers and of this number 316 reported one or more cases. Of those not answering it is fair to assume that 50 per cent. had no cases to report. Reports were received from ninety-six counties in the state, leaving eighteen not heard from.



These questions, as may be seen, were intended to localize the case more definitely.

TABLE I.

Physicians in State Medical Ass'n.....	2,608
Physicians answering .....	1,106
Physicians reporting cases .....	316

The first list of questions were sent to all the members of the State Medical Association, which includes all city and county societies, and numbers 2,608 members. There are 6,248 registered physicians in the state of Missouri. I felt that by sending the questions to the members of the State Association I could reach practically every portion of the state and thus get a fairly accurate

TABLE II.

Counties in state .....	114
Counties heard from .....	105
Counties reporting cases .....	87
Counties having no cases .....	18

Before studying the occurrence and the distribution of the disease in Missouri, it will be well to examine briefly the prevalence of the disease in the surrounding states.

TABLE III.

Iowa .....	604
*Nebraska .....	1,000
Kansas .....	189
Oklahoma .....	No record
Arkansas .....	No record







TABLE IV.

Cases reported in 1910.....	309
Cases reported from 1905 to 1910.....	326
Cases reported no date .....	7
Cases reported in 1906 .....	9
Cases reported in 1907 .....	8
Cases reported in 1908 .....	14
Cases reported in 1909 .....	30

I have definite reports of 115 cases throughout the state of Missouri which occurred in 1910, and fifty-two additional ones which occurred in Kansas City from June 1, 1910: a law having gone into effect on that date requiring all cases of infantile paralysis to be reported. These cases have all been verified by letters to the doctor reporting them, and by having obtained the names of the patients and dates of onset of the disease. This makes a total of 167 verified cases occurring in the year 1910. In addition to this number there were 142 cases reported, which I have been unable to verify, not being able to obtain the names and dates. This list has been carefully sifted and by comparison with the reports of the verified cases, I am led to believe that there are not more than ten or fifteen duplicates.

One hundred and twenty-seven cases have been reported "as occurring" during the five years previous to 1910; this includes Kansas City as the law requiring the report of infantile paralysis did not go into effect until June, 1910. The above number of cases has been verified by names and dates. In addition to this there are 226 unverified cases reported for the five years preceding Jan. 1, 1910, making a total of 326 cases occurring from 1905 to 1910.

The cases in 1910 have been reported from sixty-three counties (see Table V).

It will be seen by reference to the map that the disease is sporadic over the entire state but that the great majority of the cases is in the northwestern and western sections. This is brought out more strikingly by reference to Table VI.

TABLE V.

County	Registered Physicians	Population	No. of Cases	
			1910	1905-9
Adair .....	20	22,700	2	..
Atchison .....	14	13,604	1	5
Andrain .....	21	21,687	..	1
Barry .....	17	23,869	4	6
Barton .....	13	16,747	1	2
Bates .....	37	25,869	1	5
Bollinger .....	..	14,576	1	6
Boone .....	27	30,533	..	3
Buchanan .....	86	93,020	16	10
Butler .....	11	20,624	2	5
Caldwell .....	24	14,605	2	3
Callaway .....	23	24,400	5	1
Camden .....	7	11,582	..	10
Cape Girardeau ..	26	27,621	2	9
Carroll .....	25	23,098	2	1
Cass .....	27	22,973	4	1

County	Registered Physicians	Population	No. of Cases	
			1910	1905-9
Cedar .....	8	16,080	1	..
Chariton .....	28	23,503	3	11
Christian .....	9	15,832	..	1
Clay .....	25	20,302	2	4
Clinton .....	13	15,297	3	..
Cole .....	22	21,957	2	..
Cooper .....	16	20,311	4	..
Crawford .....	..	13,576	1	5
Davies .....	14	17,605	9	5
Dent .....	9	13,245	1	2
Dunklin .....	12	30,328	..	3
Franklin .....	25	29,830	2	6
Gasconade .....	8	12,847	5	..
Gentry .....	9	16,820	3	4
Greene .....	57	63,831	3	3
Grundy .....	13	16,744	2	2
Harrison .....	14	20,466	13	2
Henry .....	35	27,242	..	2
Holt .....	18	14,539	8	3
Howard .....	16	15,653	4	7
Howell .....	15	21,656	..	5
Iron .....	4	8,563	..	4
Jackson .....	317	283,522	54	10
Jasper .....	43	89,673	3	6
Johnson .....	25	26,297	3	3
Laclede .....	13	17,363	..	3
Lafayette .....	27	30,154	1	5
Lawrence .....	31	26,583	5	3
Lewis .....	11	15,514	..	1
Linn .....	39	25,353	1	4
Livingston .....	21	19,453	2	..
Macon .....	26	30,868	2	3
Madison .....	14	11,273	2	6
Marion .....	27	30,572	7	3
Mercer .....	5	12,335	1	2
Miller .....	15	16,717	2	..
Mississippi .....	16	14,557	1	..
Moniteau .....	23	14,375	7	13
Monroe .....	18	18,304	2	..
Montgomery .....	11	15,604	..	3
Morgan .....	6	12,863	1	2
Newton .....	18	27,136	10	..
Nodaway .....	28	28,833	3	..
Osage .....	1	14,283	..	1
Pettis .....	42	33,913	1	3
Perry .....	..	14,898	..	2
Phelps .....	11	15,796	..	7
Pike .....	16	22,556	8	..
Platte .....	18	14,429	..	3
Polk .....	16	21,561	..	3
Pulaski .....	12	11,438	..	1
Putnam .....	6	14,308	..	4
Ralls .....	10	12,913	1	..
Randolph .....	21	26,182	1	4
Ray .....	21	21,451	19	2
St. Charles .....	16	24,695	2	4
St. Clair .....	9	16,412	1	1
St. Francois .....	19	35,738	1	9
Ste. Genevieve ..	11	10,607	..	2
St. Louis (City) ..	716	687,029	29	47
St. Louis (Co.) ..	34	82,417	..	2
Saline .....	15	29,448	11	..
Scott .....	20	22,372	2	5
Scotland .....	7	11,869	2	..
Shelby .....	22	14,864	3	3
Stoddard .....	15	27,807	1	5
Sullivan .....	12	18,598	..	3
Taney .....	6	9,134	..	1
Vernon .....	27	28,827	..	1
Warren .....	..	9,123	..	2
Webster .....	17	17,377	..	2
Worth .....	6	8,007	10	5
Wright .....	..	18,315	1	..

TABLE VI.

Section	Population	Cases	Per cent.
North of Missouri River..	852,719	135	.0002
South of Missouri River..	1,731,041	174	.0001
Northwest Missouri .....	396,111	97	.00024
Northeast Missouri .....	456,608	38	.00008
Southwest Missouri .....	635,619	124	.0002
Southeast Missouri .....	1,095,422	50	.00005
St. Louis, Mo. ....	687,029	29	.00004
Kansas City, Mo. ....	248,381	52	.0002

Although the population north of the Missouri River is about half of that south of the river, the number of cases is practically the same. There were 135 cases north of the river and 174 south of the river. If the 52 cases reported from Kansas City, which is south of the river, were deducted the marked predominance of poliomyelitis would be more strikingly illustrated. The majority of the cases in the northern part of the state is in the western portion. It will be seen by reference to Table VI that there are ninety-seven cases in the northwestern portion of the state with a population of 386,111 and in the northeastern there are only thirty-eight cases with a population of 456,608. This corresponds closely with the distribution of the disease in the surrounding states. Wyandotte County, Kansas, reports thirty-three cases. It will be noted by reference to the map that fifteen out of twenty-one counties bordering on the Missouri River report a number of cases.

TABLE VII.

Location	Cases
Town .....	90
Country .....	125
On railroad .....	80
Away from railroad .....	135
On interurban line .....	5
Away from interurban line .....	210

Reference to Table VII shows the distribution of cases in their relationship to town, railroad, interurban and electric lines. It will be seen that the majority of the cases live in the country and away from railroad or electric lines. This list does not include Kansas City or St. Louis.

The cases reported from 1905 to 1910 were scattered throughout the state as shown in map and in Table IV. The report from these cases is not accurate nor the dates complete enough to warrant our drawing any conclusion as to epidemics; it is of interest only in that it gives us a basis on which to draw some inference as to whether the disease is becoming more prevalent in the state. If we compare the number of cases reported in 1910 (309 cases) and those reported for the five years previous to 1910 (326 cases) it would certainly seem that the disease is becoming much more prevalent and that it amounted to an epidemic in 1910. By reference to the map it will be seen that the greatest number of cases was in and around Kansas City, where there was a serious epidemic last fall. This would be more

marked, if we consider the thirty-three cases reported from Kansas City, Kan., which is practically a portion of Kansas City, Mo. There was also a large number of cases reported from Ray, Gentry and Worth Counties, Missouri.

It is unnecessary to single out any one county in the northwestern section of the state as the disease is prevalent throughout and can well be considered as epidemic. In the northeastern section Marion and Pike Counties seem to have the largest number of cases, seven and eight respectively. In the southeastern portion of the state the disease seems sporadic and scattered except for a group of twelve cases in the extreme southeastern portion of the section. The disease is uncommon throughout the southwestern section, except in the counties along the western border of the state. In the extreme southwestern section of the state there was apparently a small epidemic, twenty-five cases. This includes Neosho, in Newton County, where several physicians have reported that there was almost an epidemic.

In the large cities the only one in which there seemed to be an epidemic was Kansas City. In St. Louis the disease was sporadic.

A number of doctors, in response to question No. 10, reported that the disease seemed to be more prevalent in Pike County, also in Saline County; one doctor says there was a large epidemic in northwest Missouri during 1886 and 1887 and again in 1910. Another reports an increase of the disease at Independence; another says there were seventeen cases in Daviess County in 1910; another doctor had five cases in his own practice in Gasconade County.

It will be seen by this that the disease was epidemic in the northwestern portion of the state, and a few small ones in the central and southwestern portions.

TABLE VIII.

Is the disease becoming more prevalent?	
Those reporting cases	
Yes .....	94
No .....	233
Those not reporting cases	
Yes .....	33
No .....	629

In answer to the question, "Is the disease becoming more prevalent in your neighborhood?" reference to Table VII would not seem to indicate that the majority of the physicians in the state considered this to be the case. The answers were divided into two classes: physicians who reported cases of infantile paralysis and those who did not have cases to report. This was done because it was considered probable that those having cases would be more apt to think the disease was on the increase. It will be seen, however, that this is not so, as a majority of the doctors replying in both classes said they did not think it was on the increase. I do not think much



reliance can be placed in these reports as an increase of one or two cases would not attract much attention. In answering this question the greatest weight must be placed on the actual number of cases reported. These reports show that the disease was much more prevalent in 1910 than at any time previous.

TABLE IX.	
Date	Mortality
1910 .....	33
1905 to 1910 .....	48

From 1905 through 1910, eighty-one deaths resulted from infantile paralysis; of this number thirty-three occurred in 1910. Of these, twelve were in Kansas City and six in St. Louis as reported by the health authorities.

Five doctors have reported two or more cases as having occurred in the same family. One of the families in which this occurred was that of a physician, the second case developing seven days after the onset of the first. One doctor reports that a number of chickens suffered from paralysis shortly after one of the children of the family had been attacked by infantile paralysis. Another reports a similar condition as having occurred among sheep.

There were 109 cases reported in answer to questions 4 and 5. I will attempt to make no definite classification of these, but present them to you for what they are worth and allow you to draw your own conclusion. These cases have not been included in my list.

In conclusion I will state that there were 309 cases of infantile paralysis in the state in 1910, and that there were 326 cases in the five years preceding Jan. 1, 1910. This list is probably accurate to within fifteen or twenty cases, but I think that on the whole the number reported to me is probably lower than the actual number of cases occurring in the state. This is due to the fact that only about one-third of the doctors answered the questions sent them and also because, from personal experience, I know that a number of cases of infantile paralysis have not been diagnosed as such. These cases are scattered throughout the state; the greatest number occurring, however, through the northwestern and western portions. A rather extensive epidemic of infantile paralysis prevailed throughout this section of Missouri, apparently bearing a relation to the epidemics occurring in Iowa, Nebraska and Kansas at the same time. The disease also seems to be growing more common in this state, as has been shown.

There were no autopsies secured in any of the fatal cases, and the answers to the last three questions of my first letter were of a general character and did not present any information which would be of interest or value in establishing the etiologic cause or the mode of transmission.

This work is a pioneer effort in the study of infantile paralysis in the state of Missouri, and on account of lack of authority and the large expense necessary for a searching investigation it must of necessity be more or less incomplete. It at least gives us, however, some knowledge of the prevalence and distribution of the disease and I trust will be the forerunner of a more careful study and investigation carried on by the state board of health.

I wish to express my sincere thanks to those who have so cheerfully cooperated with me in this work.

Metropolitan Building.

### THE ETIOLOGY AND TREATMENT OF DEMENTIA PRÆCOX

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A few months ago I received a little pamphlet which is being widely circulated in the state of New York by the State Charities Aid Association with the very unusual title, "Why Should Any One Go Insane?" It has been but a few years since the belief largely prevailed that insanity was a manifestation of the visitation of the curse of God on the unfortunate victim. Believing this, physicians and laymen alike stood aside and did little to check the development of this devastating malady. There are some physicians, in this day of wonderful progress in matters medical, who really act as though they believed that the insane man, woman or child is possessed of devils and that they would be presuming to fight against God if they were to do anything to prevent or heal insanity. These same physicians believe implicitly in the germ theory of disease and are heartily in favor of pushing forward the great work which is being done along the line of preventing certain well-known preventable diseases.

It is time for the medical profession to awaken to the fact that insanity in its various forms is one of the most preventable of all of the many conditions which afflict man. A conservative estimate places the ratio of insane to the sane as one to 200, and the number of insane is increasing more rapidly than is the general population. Of the number of insane about 21 per cent. can be classed as under the head of the manic depressive psychoses and allied conditions. The manic depressive rank as the most numerous of all the psychoses. The second most numerous of the psychoses is that form of insanity which occurs in the developmental period of life, known as dementia præcox. This psychosis constitutes 20 per cent. of all of the various psychoses. This means that one out of every five persons insane has one of the three varieties of this psychosis,

and that one person out of every 1,000 population is being stricken in the evolutionary period of life with this particular form of insanity. While speaking of percentages, it is well to note that whereas about 92 per cent. of all cases of manic depressive insanity recover, practically no cases whatever of true dementia præcox fully recover. In some instances they may improve so far as to reach a state of relative sanity, on account of which they are qualified to live regularly outside of an institution, provided they have some one to guide and support them from the buffetings of the world.

Given a condition which permanently incapacitates one out of every 1,000 population, and that too during the developmental period of life, a condition which renders those whom it affects permanent charges on either their friends or the general public, and we certainly have a condition which is well deserving of the very best thought and study of the medical profession, in order that if possible some means may be provided whereby the proper and effective prophylactic measures may be adopted, that will result in a decrease of those who must drop out of the ranks, because of acquired defects which render them unfit for useful service, and become camp followers living on the fruits produced by the toil of others.

There are three recognized forms of this psychosis, namely, the katatonic, paranoid and hebephrenic. The selected time of life for the manifestation of the symptoms of dementia præcox in any of its forms is between the ages of 15 and 25, although it may begin earlier than the 15th year, or later than the 25th. Well-authenticated cases have been reported by very good men after the 30th year. The symptoms of katatonia while differing in some essentials from the other two clinical varieties of dementia præcox, in many respects do not so differ. The fundamental symptom of all of the three forms is a certain stolidity of conduct; and in katatonia as in the other two clinical varieties of the malady, the patient manifests his mental disorder not so much by what he says as by what he does. There are marked perversions of voluntary activity which are manifested by changes in the general character of the conduct and by isolated acts of morbid automatism. In the two forms of katatonia, the major and minor, there are present certain characteristic symptoms.

In major katatonia there is present spastic immobility of conduct, in minor katatonia we have discontinuous stereotypy. In the paranoid type of dementia præcox we have in addition to the above mentioned symptoms, which are characteristic of all of the clinical varieties, paranoid delusions; in hebephrenia we have in addition a gradual mental reduction or deterioration.

While a discussion of the symptomatology, pathology, etc., would be of much interest, the object of this paper is to present to this body of

medical men, many of whom are general practitioners of medicine, the etiology of this psychosis in order that emphasis may be given to the demonstrated fact that in many instances the development of the psychosis may be foretold; and to further emphasize the fact that there are in all persons who later develop dementia præcox, in early life evidences of maldevelopment which should be detected and given the proper importance by the physician under whose observation the person so handicapped comes, in order that adequate precautions may be taken to prevent the development of this most destructive and incurable of all of the many psychoses which afflict man.

The further object of this paper is to bring to your attention most forcibly this fact, that the responsibility for the prevention of the development of dementia præcox rests very largely with the general practitioner of medicine, or the family physician. He is the man who is most intimately acquainted with the peculiarities of conduct of the various members of the family, and he is the man who is first consulted concerning any change in the physical or mental health of the family, or any of its members. It is too often the case that he does not attach sufficient importance to the premonitory symptoms and tells the anxious parents or patient that he or she will outgrow the symptoms of which complaint is made, and while they are waiting for the prophesy to be fulfilled that time will effect a cure, the mode of life of the boy or girl is such as to encourage the progressive development of the process which will permanently incapacitate the brain for proper coordination of the various mental faculties with the conduct.

We would infer from the above statements that dementia præcox does not manifest itself acutely, but comes on the victim insidiously, and such inference is correct. A careful review of the pre-dementia præcox character will convince us that in practically all cases there were certain well-defined peculiarities of conduct which have distinguished the patient from his fellows. According to Hoch, the most prominent feature of this character has been a manifestation of the "shut-in personality," or a marked tendency toward an ingrowing of the consciousness and attention. Such persons are much given to living to themselves, dealing with abstract problems, and self analysis. They do not get along well in their associations because they are not understood, as they think. They are unable, or do not desire, to adapt themselves to their environment, their activities are characterized by unsteadiness of occupation, inefficiency, weakness of directive energy, initiative and execution. There is disharmony and improper coordination between the various mental faculties and often a distaste for the attempted solution of concrete problems. In Adolf Meyer's paper published in the *American*



*Journal of Psychology*, entitled "An Attempt at Analysis of the Neurotic Constitution," he describes the deteriorating type as follows: "In cases of dementia præcox we find over and over an account of frequently exemplary childhood, but a gradual change in the period of emancipation. Close investigation often shows, however, that the exemplary child was exemplary under a rather inadequate ideal, an example of goodness and meekness rather than of strength and determination, with a tendency to keep to the good in order to avoid fights and struggles. Later religious interest may become very vivid, but also largely in form; a certain disconnection of thought, unaccountable whims make their appearance, and deficient control in matters of ethics and judgment; at home irritability shows itself, often wrapped up in moralizing about the easy-going life of brothers and sisters; sensitiveness to allusions to pleasures, health, etc., drive the patient into seclusion. Headaches, freaky appetite, general malaise, hypochondriacal complaints about the heart, etc., unsteadiness of occupation and inefficiency, day dreaming, and utterly immature philosophizing, and above all loss of directive energy and initiative without obvious cause, such as well-founded preoccupations, except the inefficient application to actuality. All of these traits may be transient, but are usually not mere neurasthenia but the beginning of a deterioration more and more marked by indifference to the emotional life and ambitions, and a peculiar fragmentary type of attention, with all the transitions to the apathetic state of terminal dementia."

Heredity plays no small part in the etiology of all forms of insanity; it plays a most important part in the etiology of dementia præcox. The peculiarities of conduct as enumerated above as manifested by those who develop this psychosis, are indicative of a neurotic constitution which has been inherited. The heredity may be similar, but is more frequently dissimilar. It is similar when the parent or parents have had dementia præcox, or have manifested a similar type of neurotic constitution; it is dissimilar when the parents have been alcoholic, syphilitic, epileptic, criminal, tubercular, imbecilic, insane, etc. This form of neurotic constitution is more frequently inherited from the mother than from the father, as neurotic and even imbecilic women more often marry than do men similarly defective.

As stated above, heredity plays an important part in the etiology of dementia præcox and all other forms of insanity, but heredity alone does not cause insanity. It can but predispose the person who has inherited the neurotic constitution to insanity. It acts as the plus factor and without this plus factor there is rarely any insanity.

Given a boy or girl, a young man or young woman with the neurotic constitution as indi-

cated by the perversions of conduct outlined above, and we have a person strongly predisposed to the development of one of the three clinical types of dementia præcox. In order that there may be a development of the psychosis there must be in addition to the plus factor of heredity some exciting cause or causes. The exciting causes are usually easily demonstrated in the mode of life or habits of the predisposed person. Young folk with such predisposition are much inclined to excesses of various kinds. Those who are precocious and disposed to be studious oftentimes exhibit unusual brilliancy in their classes and drive their tired brains during long hours of study, taking no time for recreation, and an inadequate time for rest, until finally the neurones of the cortex, which have been for so long a time in a state of chronic fatigue, are unable to properly nourish themselves and transform the food energy into nerve energy, and finally undergo retrograde changes, and permanent damage has been done. Those who contract the alcoholic, tobacco or drug habit are prone to go to extremes and all of these but hasten the degenerative changes which accompany the development of the dementia. Auto-intoxication also acts as a potent exciting cause, as do the infections. We are perhaps all well acquainted with the views of Freud and Jung that abnormalities in the sphere of the sexual instinct play a highly important rôle in dementia præcox. In discussing these views Hoch expresses himself as follows: "In the first place, we should mention the close relationship which exists between dementia præcox and puberty. Secondly, the fact that everyone who has attempted to enter into the lives and struggles of these patients must have been impressed with the frequency with which sexual conflicts are found to have played an important rôle in the development of the disorder. Thirdly, analysis of the content of the psychosis shows us again and again the existence of sexual trends, and often when the sexuality manifests itself it does so in a peculiarly diffuse, poorly adapted manner, such as the falling in love with several persons at the same time, and the like."

Abnormal sexual practices and excessive venery also quite frequently play an important part as exciting causes of the dementia. Stress and strain under the most favorable conditions are poorly borne by those with the neurotic constitution which is peculiar to persons predisposed to dementia præcox, and under the influences of stress and strain in many cases the final break has occurred.

#### THE TREATMENT

The treatment of dementia præcox in order to be most effective should be preventive, as after the psychosis fully develops treatment is of little avail in so far as effecting a complete cure.

This preventive treatment should begin with the ancestors. It is a well-established fact that the progeny of certain defectives, of those afflicted with certain diseases, and of those who are addicted to the excessive use of alcohol, etc., very commonly are of the peculiar neurotic constitution which predisposes to the development in the adolescent period of life of dementia præcox. It would certainly seem, therefore, to be a good policy from every standpoint to prohibit by legislative enactment the marrying of imbeciles, epileptics, the insane, the tubercular, habitual criminals, the syphilitic (unless they can give positive evidence that they have been cured of their syphilis), chronic alcoholics, and those with a decided neurotic constitution. These should not marry unless they first undergo the operation of vasectomy or salpingectomy so that they may not beget progeny which will be almost sure to be defective.

As Grover Cleveland once said, "it is not a theory but a condition which confronts us." This condition is a vast and steadily increasing number of persons who have the unstable nervous organization in the predementia præcox state. The important problem for us to solve, which has not been as yet solved, is, how are we going to prevent these predisposed persons from developing dementia præcox? A careful investigation of those causes which we designate as exciting causes will help to answer this question. They should be taught to avoid all manner of excesses, abnormal practices, etc. They should be taught to follow an occupation in which they will deal more largely with concrete rather than with abstract problems. They should be advised against entering the law, medicine, the ministry or teaching. They will thrive better in the study of hogs, chickens, horses and cattle than in the study of psychology and logic. Their mental health will be better conserved by the study of fruit raising, gardening, and all manner of agricultural and horticultural subjects than in the study of philosophy, history and fiction. As so many of them do badly under the influences of higher education, their education should be limited, and as they are prone to inconstancy of occupation they should be encouraged to stick to something—preferably along the lines as mentioned above or mechanical pursuits such as the working in wood or iron, or housekeeping, sewing, millinery work, etc. They should be watched carefully for evidences of auto-intoxication, either intestinal or from any of the various ductless or other glands, and immediately on evidences of such auto-intoxication being present the proper remedial measures should be adopted to neutralize its influences and remove in so far as is possible the causes of the auto-intoxication.

After the dementia præcox fully develops the patient should be removed from his home and placed in an institution where he can receive

proper treatment and complete rest during the acute stage. The treatment will consist of rest in bed, an easily digested and nourishing diet, a stimulation of the eliminating organs, a correction and perversion of function of any of the organs or tissues of the body, in short, any measures which will improve nutrition and give the patient absolute rest at this stage will be found to be beneficial. During the later or chronic stages of the psychosis the treatment which will be found to be most effective will be along the lines of reeducation and redevelopment, and redevelopment and reeducation along industrial lines will be especially beneficial. After leaving an institution such patients should be very carefully and intelligently guided and watched over for years and every means possible adopted to prevent a recurrence which will tend to occur.

#### SUMMARY

Dementia præcox is a very common psychosis; it occurs in predisposed persons; such predisposition may be recognized without difficulty; preventive treatment will be very effective, saving many patients from developing the dementia; the treatment after the dementia develops, while not so effective, if properly carried out, will restore quite a few to a sufficient degree that they may be fairly useful citizens.

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#### CARCINOMA: WITH SPECIAL REFERENCE TO CARCINOMA OF THE LIP

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There is no medical theme that presents more points of interest to the practitioner than carcinoma. All classes of intelligent people, too, desire information on this subject. While there is much known about the disease there is still a great deal in obscurity, especially as to its etiology and source and how to eradicate it. Around this disease hover conditions that bring much sorrow and gloom to the human family: for it is associated with so much that renders it repulsive to both attendants and patient. The leprosy of the Bible does not present a more revolting picture than we frequently meet with in our own country when carcinoma has full swing and is slowly and surely consuming its victim. If we can in any way render the condition of these unfortunates better, even when we cannot cure them, we have accomplished much as physicians and surgeons.

In my judgment many cases of carcinomata can be cured if the surgeon has a knowledge of the facts the latest scientific research has developed, is able to make an early diagnosis and is permitted to do what he knows is best.



While we have several great divisions of this subject such as epithelioma, schirrhous, encephaloid and colloid, an understanding of the question in a general way will enable us to deal with all classes along the same line. One of the best definitions is Senn's, and is as follows: "Carcinoma is an atypical proliferation of epithelial cells from a matrix of embryonic cells of congenital or post-natal origin."

With our present understanding of this disease we believe there is no better definition than the one quoted above. It has been clearly shown that the nodes and alveoli that constitute the base and body of a carcinomatous tumor are filled by atypical embryonic cells, that these cells never reach maturity as they do in benign and natural growths and tissues. They not only form themselves into pockets but take possession of all adjacent tissues, so that there is rapid general invasion of all surrounding parts, and the lymphatic vessels and the nearest glands soon become affected; then the next nearest, and so on, until sooner or later the whole chain becomes involved and the poison from these cells, as well as the cells themselves, are poured out into the chiliferous ducts, then distributed to the general system and the disease soon becomes constitutional as is shown by the cancerous cachexia, enlargement of glands, and by metastatic tumors remote from the original seat, as well as general debility and exhaustion of the patient. The lymph channels are not only invaded toward their proximal ends, but toward their distal, as is shown by the enlargement of the arm in cancer of the breast. There is another fact in connection with constitutional invasion: absorption is much more rapid from a tumefied mass or gland where it can throw out its atypical embryonic cells and toxins in all directions, than where we have one side only affected, and absorption taking place from this. This is the reason why epithelioma of the lip and other distal appendages of the body are so long in bringing about destruction of the patient from constitutional invasion. Another point: The more enfeebled the tissue of any part the more rapidly these growths increase, as atypical embryonic cells develop much faster in weakened tissue, but all tissues are incapable of resisting their invasion and any tissues in the vicinity of the malignant growth that are made feeble by injury or operation, unless these cells are entirely removed so that not a vestige of them is left, are harmed instead of benefited by interference. In surgery the imperfect removal of the carcinomatous growth or of any infected gland in proximity to the growth, will shorten the patient's life. I wish to emphasize the fact that if all the carcinomatous growth with the involved lymphatics and glands are not removed we cannot hope for anything like a cure; but if this is accomplished we can reasonably hope that we have mastered the disease. If the definition is

true that there is "a matrix of embryonic cells of congenital or post-natal origin" (and with the light that is before us it seems to be), there may be more than one such matrix in the human body remote from each other; and the fact that another cancerous tumor shows up is not by any means positive evidence that we did not do our work right at first. If the second tumor should show itself in proximity to the scar or in the neighborhood of the original tumor, then it would be good evidence that the malignant growth was not entirely removed, and that a cluster or clusters of the atypical or embryonic cells were left with their associated lymphatics and glands; such a tumor should be called a recurrent growth and not a new one.

There is another point in connection with this definition that clearly sets forth the hereditary tendency to cancer; if this congenital or post-natal matrix with its embryonic epithelial cells did not exist there would be no such disease as carcinoma. Bruises, cuts from the barber's razor, jagged teeth, fissures, dark and murky climates, and the clay pipe would not cause the development of carcinoma.

This doctrine of heredity is with us to stay and we cannot get away from it. As carcinoma is the malignant tumor of those who are somewhat advanced in life, rarely occurring under the age of 40 years (though the writer has had one case of true schirrhous of the breast in a woman of 23 years), there is no doubt that many, many persons die from other causes who have this diathesis and it is never known. The wisdom of life insurance companies is shown by their strict adherence to the principle that a man is not a good risk when too many of his relatives have been victims of this malady.

There has been a strong effort on the part of Roswell Park of Buffalo, N. Y., and others to show that carcinoma is bacterial in its origin and for that reason there is nothing in heredity. He goes into the vegetable world and shows how the nut galls are formed by the sting of insects, how the great knots on the mighty oak known as the xilomata or cancerous growths of the forest, which are bacterial in their origin, eat out the center or heart of the powerful tree. It may be that these destructive knots have for their origin bacteria, but I do not think this is proved by any means, for saprophytic bacteria may be present just as we have mixed infection in the animal world.

We cannot deal further in this paper with the pathology of carcinoma for we now desire to discuss briefly epithelioma of the lip and its treatment.

Squamous carcinoma is more frequently found on the lips, nose, tongue, eyelids, vulva, penis, anus and cervix uteri than in other parts of the body. The upper lip is rarely affected, the lower lip of the male is a common seat, and it is sel-

dom found in this region under the age of 40. As people advance in age, the increase is very perceptible for each decade. Women seldom, if ever, have epithelioma of the lip. In thirty-six years of active practice I cannot call to mind a single case of epithelioma of the lips in women, and searching the literature I find very few cases in this sex recorded. Reasons why this is the case are hard to give as women frequently have squamous carcinoma of the vulva, rectum, cervix uteri and tongue. Why the lip in men should be so liable to this disease in advanced life is an interesting question. That the tissue of the lip seems to atrophy as age comes on and the muscular tissue becomes thinned, resistance not so great as in youth, may have much to do with its development. The exposure that men have to undergo to the weather, such as blizzards in winter, and scorching sun's rays in summer, is no doubt a prominent factor. Tobacco is credited by some authors as an exciting cause but I do not give this idea much consideration because the worst and in fact the majority of cases I have known never used tobacco at all; indeed at this writing I can call to mind only one man who had epithelioma of the lower lip, out of the many who have consulted me, who used tobacco in any form. This patient was an inveterate smoker. He was rarely without a cigar and when not smoking he was chewing. He was a stock man who was exposed to all kinds of weather and dust. This idea concerning tobacco was not so prevalent in works on surgery and medicine until General Grant died of carcinoma of the throat; then writers could not mention carcinoma without giving tobacco as the chief cause, as all knew General Grant was an inveterate smoker. J. Cotton Warren of Boston dwells on this so extensively in his work, "Surgical Pathology," that one would think if a man did not smoke he would be immune from carcinoma of the lower lip and tongue. I believe there is but little if anything in this idea.

The "Paddy's" clay pipe with its short stem may, and no doubt does, have something to do with the exciting cause, for a man who holds a pipe on his lip most of the time will no doubt lessen the resisting power of the tissue on which it rests, so it is possible that this is conducive to the development of carcinoma of the lower lip. It keeps the tissue cells constantly under a certain amount of pressure and enfeeblies them to some extent. Warren said he found only four cases of carcinoma of the lip in women in seventy-three cases, and three of these were smokers.

Fissures and irritation of the lip in any way should be noticed among the several causes. A slight disturbance in the lip in the form of a leukoplacia, if the lip should be injured, may cause a malignant growth but if it is not disturbed it may remain benign. As a rule all car-

cinomatous growths are simple at first but as time goes on become malignant.

Until any growth or sore of the lip proves to be suspicious it should not be disturbed. If let alone, or carefully handled, in all probability it will remain simple. If, on the other hand, it is constantly disturbed by the patient or physician and he or she meddles with it by applying caustics or some irritant unless malignancy can be eliminated without doubt, it will more than likely in time become a grave matter. It should not be interfered with by the surgeon unless there is evidence that it is hardening or a slight ulcer or fissure forms that will not heal, or there is inflammation of the lymphatics or glands with occasional pain, all of which are evidences of carcinoma. When these conditions exist there is a demand for immediate surgical interference. In a suspicious growth of the lower lip I do not believe it is proper to remove a small portion for microscopic examination unless it has been fully determined to remove it completely at the time, for if this has not been determined on any cutting or picking encourages the development of carcinoma. If the skin is broken and slight pressure between the fingers causes pearly cells to ooze out there should be no delay in resorting to a radical operation and it is the duty of the surgeon to insist on it.

It is reported of Dr. Finney of Baltimore that he wants nothing better to pass on the ability of a surgeon than to see him operate for epithelioma of the lower lip.

I am confident that the tendency of some modern surgeons is to carry the operative work too far, and many times there is failure in getting the results expected. The old wedge-shaped operation is now seldom made by the competent surgeon unless the carcinomatous tumor is very small, with little if any infiltration. (Still, I have obtained good results from this operation when there was positively no enlargement of lymphatic glands in the sublingual or submaxillary spaces.)

If the surgeon, in a case that is not extensive, dissects out the lymphatic glands, he has done the right thing; but if he should leave any of the glands by mistake or otherwise, he does harm by this attempt and in all probability there will soon be a return in the glands of the neck or possibly in some deeper organ that will force the surgeon to proclaim that it is inoperable. In removing any form, the incision should be made sufficiently far away so as to be certainly in healthy tissue on both sides. If necessary, remove the entire lip. The tissues about the mouth are very pliable and by loosening them from their attachment to the lower jaw much plastic work can easily be done, and in time the tissues will adjust themselves to the new conditions in such a way that a reasonably respectable mouth will rise out of the ruins. Every enlarged gland with its chain



of lymphatics should be most thoroughly removed no matter how far back they extend, nor what vessels are in danger of being cut in the attempt; to leave them only encourages a more rapid spread of the disease; and the complete removal is of great benefit even if there is not a permanent cure.

I desire to append a short report of five cases with results.

#### REPORTS OF CASES

CASE 1.—Twenty-seven years ago W. W. K., of Cameron, Mo., applied to me for the removal of a positive epithelioma of the lower lip on the left side. There were no enlarged glands. I took out a wedge-shaped piece, removing one-half of the lower lip, cutting well away from the hardness and infiltration on each side. After loosening up the tissues from the lower jaw and other attachments, I brought the edges together with silk and supported the stitches with adhesive plaster. He recovered rapidly, wound healing by first intention. I saw him last year and there was no evidence of any return although he is now almost 80 years old.

CASE 2.—J. W., of Union Star, Mo. 42 or 43 years old, applied to me twenty years ago, and I removed at least two-thirds of the lower lip, without dissecting out any of the glands as they were not enlarged. Results fine and no evidence of return one year ago. I have not heard from him this past year.

CASE 3.—J. H., age 60 years, had an epithelioma removed by the wedge-shaped method about twenty years ago by Dr. Benjamin Franklin, who is now dead. The patient was in my employ as bookkeeper about three years and I had an opportunity of observing the progress of the case. There was no evidence of its return when I saw him last. With his family he moved to Pennsylvania and thirteen years after the operation he died from a return of the carcinoma in the neck.

CASE 4.—M. K., of Union Star, Mo., age 46 years. Stock buyer and shipper. Temperate, did not use tobacco in any form. Applied to me in May, 1907, when I operated upon him. The epithelioma had eaten off the entire lip. There was slight enlargement of a gland over the right submaxillary gland but this gland was not affected at this time. I removed the entire lip and the hard lymphatics; loosened the tissues from the lower jaw, brought it together with silver pins and figure of eight suture. It healed rapidly and remained perfectly well for one year, when he again noticed an enlargement in the region of the right side of the right submaxillary gland. He tried to cure it himself instead of letting me know about it. Sept. 20, 1909, he again came to see me. The submaxillary gland was as large as a walnut and there was considerable infiltration on the right side of the face. It was also quite painful and a tumor over the head of the sternum had appeared on the right side. I removed the gland and this growth and found it involved one-half of the head of the sternum and was very soft. From the great amount of hemorrhage it was impossible to remove it perfectly. He died about four months after this operation, sometime in January, 1910. Death was caused from debility due to many attacks of hemorrhage.

CASE 5.—T. K., an inmate of State Hospital No. 2, had formerly lived in Cameron, Mo. I should judge he was about 63 years old. When I was a young man I had been his physician. The family applied to me to treat him in January, 1910. The epithelioma involved the entire lower lip, the chain of glands on both sides, and the sublingual glands. I removed the entire lower lip, removed the lymphatic vessels and two enlarged lymphatic glands on the right side, and the entire chain of vessels on the left, with three enlarged

glands; the one farthest from the mouth rested against the thyroid cartilage and was as large as a good-sized hazel nut; the others were larger. We loosened up the tissue, brought the edges together and held them in proximity with silver pins and silk. The wound healed rapidly and it was not long until he was entirely well. He was returned to State Hospital No. 2 where he has been ever since. I have been told by Dr. Carey, who looks after him, that there is no evidence of any return of the disease.

In conclusion I wish to emphasize that in all cases of carcinoma of the breast the axillary glands and subclavicular should be thoroughly removed.

In carcinoma of the uterus the sacral glands should be removed. In epithelioma of the clitoris, vulva or penis the superficial and deep inguinal glands should be removed. Unless this is done, instead of benefit from the operations, harm will ensue. A small portion of infected gland no larger than a pea will be a center for the rapid recurrence of the carcinoma.

#### REPORT OF TWO CASES OF TUBAL PREGNANCY\*

F. G. NIFONG, M.D.,  
COLUMBIA, MO.

I wish to present for your discussion a history of two cases of tubal pregnancy which came to my service at the Parker Memorial Hospital, University of Missouri, January, 1911. I herewith present the specimens removed at the operations.

CASE 1.—Mrs. C. F., of Columbia, Mo., American, white, married, housewife, age 29 years.

She gives a good family history, has borne two children, eleven and six years old respectively, has had no miscarriages and no very serious illness except a typhoid fever in 1905. The present trouble was preceded by something similar three years ago; it was called an acute indigestion. She had fever and much pain for several days, the pain settling in the right lower quadrant of the abdomen. Six months ago she had a similar attack which passed away in much the same manner. December 1, 1910, was due the menstrual period. She did not menstruate. She had epigastric pains and was sick two or three days. After three and a half weeks, about Christmas, she became unwell with a profuse discharge lasting five or six days and stopping about Jan. 1, and she suffered more pain, calling Dr. Shaefer to attend her. The following day I saw her for the first time. She was suffering with pain in lower abdomen, being much more tender in right lower quadrant and at McBurney's point. She had a temperature 100, pulse 90, respiration 19, and otherwise the examination was negative. Agreed on a tentative diagnosis with the attending physician of pyosalpinx or appendicitis. After three days patient consented to operation, and January 5 was operated. Median incision; free blood and clots; the right Fallopian tube had an ovoid distention near the fimbriated end the size of an English walnut; free blood at the fimbriated end. Tube and section of same showed what appeared to be placental tissue. There

\* Read in the Surgical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

were a few weak adhesions at various points. Appendix was found long and curled upon itself behind the cecum and imbedded in peritoneum. Amputated, could find no fetus; probably it was wiped out with the clotted blood. Patient recovered rapidly without any complications.

CASE 2.—Mrs. V. V., colored, housewife, age 22 years. Family history and previous history negative.

Present trouble. She failed to menstruate in October, 1909, and supposed she was pregnant. However, in November, December and January following she menstruated. She noticed also a gradual enlargement of the abdomen and breasts. On Feb. 15, 1910, she first noticed fetal movements. Fetal movements continued to June 29th. She felt confident she was pregnant and she went on normally until June 26, when she began to have much cramping and abdominal pain and supposed she was in labor. She called a physician, but labor was slow and he went away with instructions to call him later. The first day of labor a great deal of mucus was discharged. On the second day some hemorrhage. She continued to have slight pain and bloody discharge for a week, then all pain disappeared and she got up and went about her household duties. The fetal movements on the 26th to 28th were very strong. Then they ceased and did not reappear. She entered the hospital Jan. 17, almost seven months after labor. Examination showed a large non-fluctuating tumor looking like a full term pregnancy. A smaller movable tumor seemed to be planted under and on the left of the large mass—could not feel or see the cervix. Operation showed a large tumor to the right of the uterus, filling most of the pelvis and abdomen, adherent to pelvic and abdominal walls, intestines and omentum, necessitating much adhesion work. The mass contained a full term fetus and placenta—no fluid in the sac—fetus slightly macerated. Ureter and pelvic vessels exposed in freeing mass. Drainage and closure. She had some rise of temperature for ten days or more, 99 to 101 F. She had a cough; otherwise recovery uneventful leaving hospital on the twentieth day.

These cases are of interest because No. 1 exemplifies the more frequent and early results of tubal pregnancy—rupture, hemorrhage, some inflammatory reaction, and the difficulty of diagnosis, being easily mistaken for pus tube, appendicitis, or other pelvic trouble. Case No. 2 is unusual in that the pregnancy went to full term and labor was unavailing, also in the long period elapsing without trouble before surgical intervention.

#### CERTAIN SYMPTOMS WHICH ARE FREQUENTLY UNRECOGNIZED AS BEING INDICATIVE OF DISTURBANCE OF THE PROSTATE AND VERUMONTANUM\*

JOHN R. CAULK, M.D.  
ST. LOUIS

That the prostate and deep urethra are responsible for a manifold symptomatology which heretofore has often been ascribed to other causes is being more generally recognized; but even now the pelvic organs in the male receive far less recognition than they merit. The purpose of this paper is to call attention to some of the various symptoms emanating from the prostate

and verumontanum, and to emphasize the fact that instead of treating these symptoms the treatment should be directed to the pathologic condition from which they originate. We will consider chiefly the symptoms referable to a chronic prostatitis. Prostatic hypertrophy will be omitted and only brief mention will be made of prostatic cancer.

The symptoms of chronic prostatitis have been classified as sexual, urinary, and referred. Of these the sexual and referred are the most frequent. The prostate being a sexual gland, one should naturally look to it in any derangement in the sexual life, and generally one will find definite pathologic changes. It is true that most of these patients are mentally unbalanced; but I feel that the mental condition is given far too much credit as a causative agent in many cases; in my experience it usually plays a secondary rôle. The prostate and verumontanum are as a rule at the bottom of the trouble, and a systematic treatment of these will often secure results which are surprising.

As stated before, the urinary symptoms are somewhat less frequent than the other two types; nevertheless they occur in a great many cases and are often very distressing. Among the many urinary symptoms laid down in text-books are: Increased frequency of urination; pain at the beginning, during, and at the end of urination; slow, difficult and urgent urination. These symptoms have been described as being due in most cases to a prostatic median bar in conjunction with chronic prostatitis and posterior urethritis. In perusing the literature, one sees very little mention of the verumontanum in such cases; and I wish to call your attention to the great importance of this structure in the production of many of these symptoms. Frequently symptoms of urinary obstruction and irritability find their cause almost entirely in the verumontanum, which is found enlarged, swollen, tender, and at times irregular and cystic. One of the cases which I will report demonstrates this cystic condition very beautifully: the so-called urethritis cystica chronica; the verumontanum and the whole supramontane portion of the urethra being studded with numerous small cysts. Among the common urinary symptoms due to lesions of the verumontanum are increased frequency and urgency of urination, burning during urination, pain at the beginning and end of urination, hematuria and symptoms of urinary obstruction, such as slow, difficult urination with feeble stream.

Treatment to the verumontanum through the endoscope, such as applications, removal of granulating areas, puncture and treatment to cysts, or what other treatment seems indicated, will often restore the patient to his normal state.

As a result of the irritability to the verumontanum there occurs in many of these patients a

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vesical contracture, due chiefly to the fact that the bladder has emptied itself so frequently that it has not been subjected to its normal distention. This generally takes care of itself after the cause of the irritability has been removed. The patient gradually retains more and more urine, and in a short time gets his bladder back to normal limits. Should it not return spontaneously, hydraulic distention of the bladder will remedy the condition. As an example of such urinary symptoms the following cases are illustrative:

#### REPORTS OF CASES

Mr. B., 55, married. Complaint: frequent, urgent micturition, burning during urination, pain in the small of the back. History: patient has always been healthy; gonorrhea when a young man lasting several months with left-sided epididymitis during the attack. No trouble followed until ten years ago, when he began to urinate frequently, getting up once or twice at night, since then the frequency has been progressive, at present he voids every hour in the day and has to get up from five to ten times at night. For some eight or nine years has had burning during urination, which has been almost constantly present. Has had considerable urgency, which has gradually become worse; at times patient will wet his clothes if unable to answer call immediately. There has been considerable hesitancy at times in starting the stream; no hematuria and no definite pain. He has been treated by various physicians for seven years but very irregularly. Says he has received no benefit from massage, sounds and instillations. I saw him first in December. General physical examination negative. Examination of urine, three glasses. First glass clear, containing shreds composed of pus and epithelium; other two glasses clear. External genitalia negative. Rectal examination: prostate slightly enlarged, considerably indurated and irregular, lateral adhesions, particularly on the right side; seminal vesicles indurated at their bases. Prostatic secretion contains a considerable number of pus cells. Urethral exploration shows no stricture; cystoscopic examination, catheter finds 20 c.c. residual urine. Bladder capacity 300 c.c. There is a slight median bar; bladder wall normal; no trabeculation. Endoscopic examination shows a large, red, congested verumontanum; orifice of the utricle normal. Patient was treated for several weeks by massage, dilatations with Kollman's dilator, irrigations, instillations, etc., but showed practically no improvement, except that his backache got better. During the third week of treatment an application to the verumontanum with nitrate of silver stick was done after the removal of several irregular granulating areas. Patient experienced but little discomfort afterward, except an aggravation of the urinary symptoms. On the third day he began to improve and at the end of the week could retain his urine for three or four hours in the day, getting up once or twice at night. Urgency had almost entirely subsided; still some hesitancy, due evidently to the median bar. Since then patient has been treated regularly. The urethra applicated and treated through the endoscope four times. The verumontanum is about half its original size; congestion has practically disappeared. This patient is absolutely well; he does not have to get up at night, no increased frequency during the day; urgency has entirely disappeared.

Dr. C., 35, married. Complaint: soreness in perineum; slow, small stream; frequent urination. History: gonorrhea several times when a young man. Posterior involvement twice. For several years has had soreness in his perineum and has always been

conscious that he had a urethra. Stream has been slow, small and at times very urgent. This condition has been constant. It has progressed but little for the last year and a half. Patient has to get up two or three times at night and voids every two hours in the day. Sexual powers normal. Examination: healthy man; external genitalia normal, except some induration of the globus minor of the epididymis on the left side. Urine: glass 1 contains many shreds; all three glasses clear. Rectal examination: prostate slightly enlarged, indurated, quite tender, particularly in the middle line under the urethra; seminal vesicles slightly indurated. Membranous urethra negative. Prostatic secretion contains many pus cells. Endoscopic examination reveals a very large, reddish-blue verumontanum, studded with small cysts, the whole supramontane portion of the urethra also studded with cysts, orifice of the utricle seems normal. Cystoscopic examination negative, except for a slight median bar. Patient seen first in February. Since then he has been treated regularly by massage and routine treatment. Applications and treatment to the verumontanum on four occasions. Treatment consists of incising, puncturing and cauterizing the cysts, and applications to the verumontanum. Patient says he is a new man. All soreness in his perineum has entirely disappeared. voids freely, good stream, no increased frequency in the day time and does not have to get up at night. This case demonstrates the importance of the verumontanum as a causative factor of urinary obstruction.

The most important and most frequent group of symptoms having their origin in the prostate and verumontanum is the referred group. Among the many referred manifestations are pains in the small of the back (lumbago), pains over the sacro-iliac synchondroses, pains down the legs (sciatica), suprapubic, perineal and sacral pains, pain in the urethra, groins and testicles, at times pains simulating renal colic, various rectal sensations and herpes preputialis.

A great many of such pains in men have their origin in the prostate and deep urethra. One sees frequently patients who for years have had one or several of such symptoms and who have been treated by various local remedies, such as plasters, blisters, massage, fixation, etc., and still are constant sufferers because the pathologic process which has been the offending agent has been entirely overlooked; whereas by systematic treatment to the seat of the trouble they might have been rapidly relieved. I do not wish to convey the idea that I think all the pains above described to which man is subjected are secondary to the prostate; but I feel that a great many of them are, and that the prostate should be ruled out first. An interesting manifestation is herpes preputialis before one satisfies himself as to the cause of these pains.

It is extremely important, especially in older men, not to disregard the prostate when such pains present themselves, particularly pains in the hips, as they are frequently indicative of a prostatic cancer, and an early diagnosis is essential. I can find no reference made to it in literature, but it is a frequent symptom in association with disorders in the prostate and deep urethra. The following case is a good example:

## REPORT OF CASE

Mr. C., married. Complaint: irritable, swollen foreskin, herpes, backache, slow stream and premature ejaculations. History: gonorrhea ten years ago, lasted four months, no complications. For years patient has had premature ejaculations, pain in the small of back, and has noticed that his urine has been voided with less force and smaller stream than previously. No increased frequency of urination. These symptoms have not been progressive. For two years he has noticed that his penis has been very sensitive and that his clothes caused pain when he walked. Shortly after the onset of this trouble a group of herpes developed. Since then patient has kept his penis wrapped in a bandage in order to have any degree of comfort. If he removes it in the daytime, the prepuce rapidly becomes swollen and tender. Examination: healthy man. General examination negative. Bandage removed from penis shows the prepuce to be somewhat redundant, very edematous, red, tender, and several typical herpatic lesions scattered around; external genitalia otherwise negative. Urine: glass 1, 2 and 3, clear. Glass 1 contains shreds. Rectal examination: prostate broader than normal, indurated and tender; no lateral adhesions; seminal vesicles negative. Prostatic secretion contains many pus cells. Urethral examination shows no stricture. Cystoscopic examination: catheter passes easily, no residual urine, bladder capacity normal; cystoscope shows a small, rounded, median bar; bladder wall normal. Endoscopic examination: verumontanum not particularly enlarged, very red and irregular. Orifice of the utricle normal.

*Treatment.*—Patient has been treated regularly for three months by routine treatment, with several verumontanal applications. In two weeks after the first treatment patient discarded his bandage, now has no knowledge of any discomfort to his penis except an occasional herpes; the swelling and tenderness have entirely disappeared. His backache has not troubled him since the first two weeks of treatment. Stream is voided with more force, but still not perfect owing to the median bar. Parallel with this improvement the prostate and verumontanum are equally improved. The prostatic secretions contain but few scattered pus cells. The prostate is about one-third smaller and much softer and the verumontanum about normal in color and not tender. The patient will have the median bar removed later.

The cause of these referred pains is ably explained by Head, who says:

"A painful stimulus to an internal organ is conducted to that segment of the cord from which its sensory nerves are given off. There it comes into close connection with the fibers for painful sensation from the surface of the body, which also arise from same segment. But the sensory and localized power of the surface of the body is enormously in excess of that of the viscera and thus by what might be called a psychological error of judgment, the diffusion area is accepted by consciousness and the pain is referred to the surface of the body instead of to the viscera actually affected."

The prostate having such a rich nerve supply, it is very easy to conceive how disorders in and around it could give rise to such a multiplicity of symptoms. One usually finds on examining the prostates of such patients various grades of prostatitis and periprostatis with lateral adhesions between the prostate and pelvic wall. Indeed, frequently by rectal examination one can tell the patient on which side his pain is located by feeling these changes without asking before-

hand. A very important diagnostic point which one frequently can elicit is that pressure on the prostate or on the lateral adhesions often brings out or exaggerates the patient's pain. This point I have never seen mentioned before. The prostatic secretion almost always contains pus cells in varying amounts microscopically, and a microscopic examination should always be made, as frequently the prostate may contain a great deal of pus and still feel practically normal by rectal touch. One should not say a prostate is normal until he has examined the expressed secretion, as a little pus may go a long way in causing trouble in such a highly sensitive locality. The changes in the verumontanum in such cases are much the same as described above, and often this structure is the seat of trouble without much change in the prostate.

The utriculus masculinus is occasionally the focus from which the symptoms spring. Endoscopically in some of these cases one sees the orifice of the utricle, irregular, congested and swollen, and on aspiration pus may be secured which has been retained owing to the obstructed orifice. In such instances one has to dilate the orifice, aspirate the contents, and treat the utricle by mild injections through special syringes made for such endoscopic injections.

I will now report a few cases demonstrating some of the referred symptoms:

## REPORTS OF CASES

Mr. L., age 44, married, occupation baseball pitcher, seen first in June, 1910, complaining of severe ache in the small of the back, and sexual weakness. Patient has always been healthy. Gonorrhea five years ago, lasted four months; cured. One year ago began to lose strength and noticed in pitching that his back got tired. This was shortly followed by constant aching pain across the small of the back. At first more pronounced on the right, then later on both sides. Pain has been so severe that in the morning it takes him two hours before he can move about with any degree of comfort. Had an x-ray picture taken about a year ago and the doctor told him that he had some intra-vertebral disk involvement. He was put in a plaster cast for a month but did not improve. Since a boy has had to urinate more frequently than his fellows, getting up once or twice at night. Occasionally has to wait to start the stream but stream is of good size and force. Sexual powers since the onset of symptoms a year ago have greatly diminished. Examination: healthy, heart and lungs negative; spinal examination negative; external genitalia negative; urine clear, all three glasses. Glass 1 contains many shreds. Rectal examination: prostate moderately enlarged, tender, markedly indurated, particularly the right lobe; induration involves both seminal vesicles, particularly the right; marked lateral adhesions on the right side; few on the left. Prostatic secretion composed mostly of pus cells; urethra free; no stricture. Endoscopic examination shows a large hemorrhagic irregular verumontanum; on the right side below the orifice of the utricle there was a small villous looking mass about the size of a millet seed. Orifice of the utricle normal in appearance. Cystoscope shows a definite median bar; 20 c.c. residual urine; otherwise negative.

*Treatment.*—Patient was treated at intervals for four months by routine prostatic treatment. The veru-



verumontanum was treated five times; the irregular growth removed at the first sitting proved to be granulation tissue. Patient improved gradually and by the end of July, that is, a month and a half after he began treatment, his backache had almost entirely disappeared; had it to a slight degree only occasionally. Patient was discharged on October 3, entirely free from his backache; frequent urination had subsided and he says sexual powers are better than for two years.

This case demonstrates that a severe backache simulating spondylitis deformans may originate in the prostate and verumontanum.

H. T. J., 67, married. Complaint: intermittent painless hematuria, slight increased frequency of urination, severe pain in right hip and down right thigh. One sister and a daughter died of cancer. Patient has always been healthy. One year and a half ago suddenly after exercise began to pass blood in his urine. Urine was entirely bloody; this lasted for a day and cleared up. Since then he has had many similar attacks of bleeding lasting from a half to three days. There has been a gradual increased frequency of urination, has been getting up at night from one to three times for a year, but voids freely. No pain in kidney regions. For two months has had a gradual increasing pain in right hip, which has been constant, and for the last six weeks pain has radiated down his right thigh. There has been considerable loss of weight recently. Pain has been so severe that patient is unable to walk.

*Examination.*—Patient is a sick-looking man, pale; heart and lungs negative; abdominal examination negative; kidneys not palpable nor is there any tenderness in the kidney regions; external genitalia negative; enlarged glands in both groins; urine clear in all three glasses. Rectal examination: prostate small and very firm, in places almost stony; right seminal vesicle adherent, firm and indurated; slight intervesicular plateau; membranous urethra thickened. Microscopic and chemical examination of the urine negative. Patient was not cystoscoped as his condition was an inoperable cancer of the prostate and seminal vesicle and he was having comparatively little urinary distress at the time, so it was thought that the less done to the urethra the better. Patient gradually went down hill suffering excessive pains in hip and leg and died six weeks after I first saw him.

This case is reported to call attention to the characteristic pains in the hips and down the legs in patients with prostatic carcinoma, and to emphasize that one must not necessarily expect large prostates in cases of cancer. This patient had been told by several men that he had no cancer because the prostate was too small.

The keynote of success in handling cases of prostatitis is routine, systematic and thorough treatment. One cannot expect to accomplish results by methods which are ill-directed and inconsistent. These patients require prostatic massage at regular intervals, urethral dilatations, instillations, and occasionally applications to the verumontanum, if it is found diseased.

The question of prostatic massage seems to be a little confused. One must massage quite vigorously after the patient has become accustomed to it. The prostate and vesicles must be emptied of their contents, and this requires firm pressure. It is readily tolerated after the first few times,

and it is rare to see any evil effects resulting if the urethra and bladder are always irrigated following the massage.

#### CONCLUSIONS

1. A varied symptomatology may result from disturbances of the prostate and verumontanum.
2. The symptoms are best classified as sexual, urinary, and referred, the referred being the most interesting.
3. Among the referred symptoms are pains in the small of the back, pains down the legs, perineal, groin and sacral pains, urinary pains, and occasional attacks of pain simulating renal colic.
4. Herpes preputialis is occasionally associated with disorders of these structures.
5. The verumontanum may be responsible for urinary obstruction.
6. An interesting diagnostic point is that one can frequently magnify the patient's pain by pressure on the prostate or on the lateral adhesions between the prostate and pelvic wall.
7. Routine and systematic treatment is essential.
8. The endoscope is a great adjunct in the treatment of these cases.

Humboldt Building.

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#### PATHOLOGY OF THE RECTUM IN DIAGNOSIS AND TREATMENT \*

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ST. LOUIS

In the study of the embryology and evolution of the alimentary canal the scientist finds a most interesting illustration of the adaptation of means to an end. We find, however, as in other parts of the body certain developmental defects which either prevent function or impair the same to such a degree as to make life a burden. I refer to cases of imperforate anus or the termination of the gut in one or more of the pelvic organs. This condition is sufficiently frequent to make it obligatory for every obstetrician to examine the perineum of every new-born child coming under his observation.

It is not my purpose to enter into a discussion of the treatment of those conditions; suffice it to say that the less surgery the better until such a time when the child is strong enough to do more delicate and efficient work.

I think you will agree with me that the lower gut is the most neglected part of our anatomy. Few physicians would think of treating the throat, lungs or heart without a thorough examination, while more than 50 per cent. of the average practitioners do not hesitate to prescribe for diseases of the rectum without any effort at making a correct diagnosis. This deplorable

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condition of affairs is not limited to the over-worked general practitioner alone but applies to many of our neurologists, gynecologists and genito-urinary specialists. Is there any excuse for this kind of negligence, and should we be surprised that when our patients fail to secure any relief they consult the itinerant who at least listens to their tale of woe, gives them some attention, promises much, and incidentally relieves them of their surplus cash? It is my purpose to call your attention to the value of the pathology of the lower gut in making a diagnosis of both constitutional and local diseases in organs remote and contiguous.

In the study of the infectious diseases we have a most promising field and while much has been done the last few years, much remains for the conscientious investigator. We have here all the catarrhal conditions found in the throat; ulcerations of various types and stages are easily demonstrated. In the infected ulcer we find the cause of rectal abscesses, fissures, fistulas and strictures, unless the latter is caused by an extrinsic factor. Any abnormality as to quality, quantity or frequency of fecal discharge demands our attention. A macroscopic and microscopic examination of the feces should be made, together with a physical examination of all the pelvic organs. A definite diagnosis of tuberculosis, gonorrhea, syphilis, cancer and intestinal parasites can generally be made by this method. Eighty per cent. of all cases of cancer of the intestinal tract are found in the lower bowel. Tuberculous and syphilitic lesions must be differentiated from those caused by functional or mechanical conditions. What is purely a local infection primarily is frequently carried into the sigmoid by the indiscriminate use of the family or neighborhood syringe. The clinical history of the following cases briefly stated will serve to illustrate five typical conditions frequently found.

CASE 1.—R. U. M., aged 40, locomotive engineer, first consulted me Sept. 30, 1906. Has not been well for five years, when he gives a history of having had acute dysentery. Family history negative. Has never had any venereal disease. Present weight 140 pounds; lost 35 pounds in the last two years. He is anemic, irritable and complains of being tired all the time. Morning temperature subnormal. Afternoon and evening record show elevation of from two to three degrees. Respiratory organs normal. No heart lesions can be discovered aside from temporary functional disturbances. Quantity of urine 20 ounces per day. Specific gravity 1030, reaction acid, no sugar, no albumin, traces of indican and a heavy deposit of uric acid. No desire for food, and great distress after eating. Bowels move from 15 to 25 times during twenty-four hours. Odor of discharge resembles very much that of the feces in the second and third week of typhoid fever, multiplied by ten as to penetration and endurance. Examination of feces shows shreds of mucous membrane, pus, blood and partially digested food. Examination with the proctoscope and sigmoidoscope revealed a characteristic and promising field for both surgeon and internist which must be seen to be appreciated. Ulceration in its various stages from the anus to the descending colon. Marked constriction of the circular

fibers at the inferior end of the sigmoid made several attempts necessary for a satisfactory exploration.

The treatment of the above case consisted briefly in the following: Dilatation of the constriction through the proctoscope by a wales bougie beginning with a No. 3 and gradually enlarging the lumen until a No. 7 could be passed without pain. Local applications of antiseptics and astringents as indicated at each treatment. If I had but one remedy available I would unhesitatingly use ichthyol, but I have had good results with the oil of eucalyptus in olive oil and the various silver preparations. Bismuth and the sulphocarbolates administered on an empty stomach have aided materially, especially when the disease was not confined to the lower bowel. Food should be nutritious and must not be irritating as to quality or quantity. After two months' treatment the patient resumed his work, and has not lost one day since on account of illness. A recent communication informs me that he weighed 200 pounds and enjoys his work.

CASE 2.—Dr. X., aged 52. First consulted me Sept. 21, 1909, with the following history: Early in 1909 he was disturbed from ten to fifteen times every night by painful erections. He consulted several genito-urinary specialists who cauterized the prostate repeatedly at intervals for six months without any relief of the distressing symptom. He was then advised to lead an out-door life. After spending six weeks in Florida with no improvement he returned to his home. When first seen on the above date his general condition was a true picture of anemia, insomnia and melancholia. Physical examination revealed a deep indurated rectal ulcer, anterior about one inch above the external sphincter and a mucocolitis. The nerve endings were exposed and pressure on the ulcer provoked the symptom described above.

Local treatment relieved all the distressing symptoms and he is in every particular a healthy man. This case illustrates the intimate relation of the pelvic organs, their common source of nerve-supply and the value of a rectal examination in all cases.

CASE 3.—Mrs. S., age 46, consulted me in October, 1910. Family history negative. Has had four healthy children. Never had any venereal disease. Patient has not been well for about five years. Two years ago a general surgeon did an anterior fixation of the uterus. No relief from the headache and backache followed this procedure. A rectal examination revealed two ulcers in the grasp of the external sphincter. Local treatment at intervals for two months relieved her of all distress. This case is given briefly as an illustration of referred pain in the female and the value of looking through more than one pair of diagnostic glasses.

CASE 4.—Mrs. T., age 52, was referred to me by Dr. B. for examination, Nov. 26, 1910. Patient has been losing weight for the last year. Examination of lungs and sputum by Dr. B. were negative. Examination of rectum revealed tuberculous ulceration of an extensive nature. Palliative treatment was instituted with only temporary relief. Patient died of tuberculous meningitis on March 5. At no time during the illness of this patient could any tuberculous lesions be discovered in the throat or lungs. I might say in passing that the patient passed an examination for a life policy ten days before she consulted me.

CASE 5.—Mr. P., age 43. Railway mail clerk. Weight 118 pounds. Has lost thirty pounds the last twelve years. Has not been able to work for five



months. First consulted me Sept. 12, 1910. Patient is very anemic, can retain but little predigested food. Thoracic and circulatory organs normal. Urine normal. From five to six fecal evacuations daily. Examination of feces showed pus, mucus, blood and undigested food. Patient said he had contracted syphilis at the age of nineteen. Was treated for three years including a number of baths. He assured me that he had entirely recovered as a number of physicians had pronounced him well. Proctoscopic examination led me to suspect syphilis and I requested an examination of his blood. Accordingly Dr. Fisch made a Wassermann, with marked positive findings. Proper treatment was at once instituted and the patient was able to resume work on November 10. He now has about two evacuations daily and is gaining weight slowly. Comment upon this case is unnecessary.

Having made a diagnosis of hemorrhoids we should not be satisfied until we ascertain the etiology in each case. It may be difficult to ascertain the combination of factors responsible, but a diligent search will often reward our efforts. We should look well to the habits, digestion, circulatory disturbances and any intrinsic or extrinsic factor such as tumors or misplaced organs. Removal of hemorrhoids without taking into account a heart lesion, cirrhosis of the liver, or a retroverted uterus, has done much to discredit valuable work of able operators possessed with a limited horizon. All pathologic tissue should be submitted to a proper examination and an early diagnosis of malignancy will frequently reward our efforts.

Constipation and auto-infection are terms used by many modern physicians, and unless intelligently employed mean just about as much as infantile fever or biliousness.

Time will not permit me to discuss this interesting field; suffice it to say that no up-to-date physician will treat constipation without first making a physical examination of the entire intestinal tract as well as a proper examination of all the excretions.

While it may not be literally true that "all is well that ends well," it is true that no one can be comfortable or religious with a diseased rectum. Now frankly, do we not owe it to our patients as well as to ourselves to examine the lower bowel with as much care as we do the other organs of the body?

Humboldt Building.

## FUNCTIONAL MONOPLÉGIA

### The Report of a Case

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KANSAS CITY, MO.

The interest in cases coming under this title is of necessity clinical since all laboratory aids in the living can only report negative findings and none of these cases go to an autopsy unless by

some attendant accident, which is rare. The effects as well as the causes are purely physiologic and our best proof of the correctness of the diagnosis is the subsequent course. Cases coming under this title often create strong adherents for the charlatans and those practicing under the name of one of the many "pathies." These cases are usually of more concern to the conscientious regular physician than to the irregular, in that we take into consideration in the diagnosis and care many or all of the organic diseases which are often simulated. Pure functional disorders probably occur in every special branch of medicine, but nowhere are they more frequently met with than in a neurologic practice, in that motor paralyzes or disordered sensations are the choice fields for this group of neurotics. There is no doubt but that a number of cases with functional derangements are not correctly recognized by many clinicians, given incorrect treatment with poor results, and eventually pass into the hands of some irregular whose inability to make a diagnosis together with his unscrupulousness gives him an opportunity for producing a cure. Thus when we meet with these cases we should not only make a direct diagnosis but also a differential, by considering every possible organic disease. Having done this we are then prepared to handle the case with full confidence. For without our own self-confidence we can hardly expect to instill self-confidence in the patient.

We may divide the true functional disorders into two grand groups, one where the functional is accompanied by no antecedent or concomitant organic disease; and second, where psychic functional alterations accompany organic conditions. The latter class is not infrequently met with both in the mild and severe diseases of different organs. The former is less frequent but on account of its pureness is of greater academic interest; to this group belongs the interesting case whose history follows:

### REPORT OF CASE

CASE X. Y.—Male, age 17. Student in a military school. His work in the school was highly creditable, but he did not have the same interest to attend as he manifested before entering.

Mother is healthy and presents no neurotic elements. The father is a healthy, active business man. He had a few convulsive attacks which began about the time of puberty and disappeared after about two years. The exact nature of these attacks cannot be ascertained by an interview with him.

The mother states that this is her only child, and was her only pregnancy. His birth and early childhood were quite normal; in fact, he has been an exceptionally robust boy. During the past three years the patient has had fainting attacks at long intervals. The parents state that not more than eight or ten all told have been observed. Each attack consisted of a momentary loss of consciousness with a slight pallor and eyes turned upward. There were no clonic convulsive movements. There was never any urination, froth-

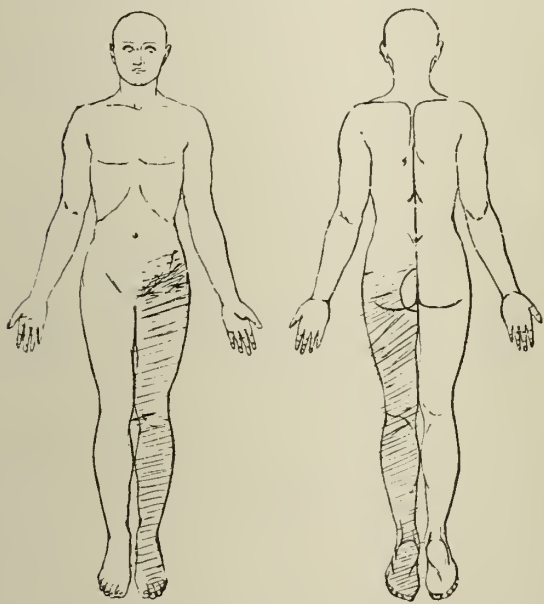
ing at the mouth, or biting of the tongue and cheek during a "spell." There is no history of any previous attack of numbness, motor palsy or any one of the special stigmata of hysteria.

**Present Illness:** On March 29, 1911, the patient states that he remembers standing at the top of a staircase on the second floor of a school building, and following this he next recalls finding himself in a heap at the bottom of the full flight of stairs. He believes he fainted and fell. He thinks he recovered consciousness in less than one minute. There followed no sore spots, bruises nor headache. After recovering consciousness he could not stand nor use the left leg. The power in the right leg and upper extremities was normal. He also noticed that the left leg was numb. At the time of this incident there was no one at either the top or bottom of the staircase to observe what occurred. Following this accident the patient was carried out of the school building to his room where an osteopath was called in and treatments given. Another mild seizure occurred on the following day during a treatment by the osteopath. On the 31st the patient was brought to Kansas City and seen by an osteopath who probably feared to undertake the care

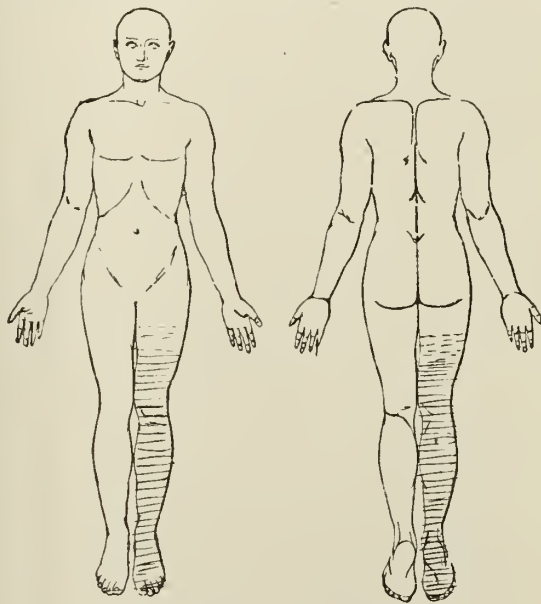
tion in the right leg is normal. Epicritic, protopathic and deep sensations are completely abolished in the left leg. The line of demarcation above gradually shades into the normal over one or two cord segmental areas and becomes completely normal posterior at the twelfth dorsal segment, and anterior at the eleventh dorsal segment. During the examination covering about one hour, the line of demarcation varies 5 cm. from time to time. Sensation over the left breech supplied by the fourth and fifth sacral segments and of the entire penis and scrotum is normal. The reflexes in the right leg are normal. The patellar and Achilles of the left are present and equal the right. There are no Babinski, Oppenheim or Gordon phenomena. Stroking the right plantar region produces flexor toe reflex, and on the left no response whatever.

With these findings a direct diagnosis of functional monoplegia was made.

Turning to the differential diagnostic method, one which holds a high place in neurologic diagnosis and should be utilized in every case of possible functional disturbance, we are promptly



Case X Y. March 31, 1911. Continuous lines indicate complete loss of all forms of sensation; interrupted, a partial loss.



Case X Y. April 1, 1911, a. m. Continuous lines indicate complete loss of all forms of sensation; interrupted, a partial loss.

and treatment of the case. The father consulted Dr. Frank Iuen who called me in consultation.

An examination of the patient shows a well developed, exceptionally robust boy. Chest and abdomen normal. There is a mild acne vulgaris covering the face. All mental functions are normal. An examination shows all the cranial nerves functioning normally. The pupils react to light and accommodation briskly and equally. All the extrinsic ocular muscles are normal. An ophthalmoscopic examination shows a normal nerve head and fundus. Motion, sensation and the reflexes, deep and superficial, of the upper extremities and trunk are normal. All the muscles of the right lower extremity are quite powerful. In the left lower extremity there are absolutely no movements at the hip, knee, ankle or toes, and none are produced by any opposed movements of the right extremity. The type of palsy is distinctly flaccid. Sensa-

tion in the right leg is normal. Epicritic, protopathic and deep sensations are completely abolished in the left leg. The absence of mental and cranial nerve symptoms, the flaccid type of motor paralysis, the type and distribution of sensory disturbance, and the reflex findings are the facts that lead us to such conclusions.

1. Professional paralysis is ruled out by the type of palsies, the distribution, the age and the fact that the patient has never applied himself over a long period at any one occupation.

2. Polymyositis and neuromyositis are regressive conditions, have more or less pain and tenderness, and have not the same sudden onset as observed in this case.



3. Polyneuritis has a slower onset, usually has pain and has not the same completeness of paralysis presented in this case.

4. Nerve paralysis and nerve trauma give sensory findings with a different distribution than is presented in this patient. An investigation into the character of the onset and the etiology aids in the diagnosis.

5. For the vague reflex paralyses we have no causative factors usually given, such as troubles of the uterus, prostate, bladder, urethra or phimosis. In these the onset is not so sudden.

6. Spinal cord concussion produces symptoms less definite and more diffuse.

7. Spinal cord trauma never presents a pathologic picture with the type of motor, sensory and reflex changes seen in the left leg of this patient. With the clinical data presented one would not even think of a modified Brown-Séquard paralysis. There is no history or evidence of spinal cord trauma, especially by gunshot or stilleto.

8. Acute anterior poliomyelitis is ruled out by the absence of febrile and constitutional symptoms, the retained deep reflexes and sensory chart.

9. Cord tumor has a slow progressive course and produces a different type of distribution of sensory paralysis. Particularly in the extramedullary types is there much pain.

10. For cord abscess we have no infectious symptoms, and too rapid an onset. The motor and sensory paralyses have a different distribution.

11. Myelitis can be ruled out by the absence of any indications of the usual causes. The motor and sensory paralyses present a different distribution.

12. Hematomyelia is the most likely organic condition to be confused with this type of a functional monoplegia. It often occurs in the course of other spinal cord diseases. It is to be borne in mind that a hemorrhage in the spinal cord usually takes a columnar form limited to one-half of the cord and often extending up and down through several of the segments. Trauma is given as one of the frequent causes of a hematomyelia. However, we cannot conceive of a hemorrhage in the spinal cord producing the clinical picture as seen in this case, nor the symptoms being so complete.

Now, having made an undoubted diagnosis of a functional monoplegia we immediately proceed to treat the patient by leaving a strong impression of the possibility of accomplishing a speedy restoration to a perfectly normal state. Having done this we can continue to apply psychotherapy at one or more subsequent visits.

On the morning of April 1 the patient reports feeling fine and having slept well, and an examination gives the same findings as on the previous day with the exception that by commands he can

be made to contract slightly the left thigh extensor muscles, but not sufficiently to move the lower extremity. The upper line for the obtunded sensation has reached the middle of the thigh.

At 1:30 p. m. the patient had a mild paroxysm consisting of a sudden slight tonic rigidity, with some pallor and eyes turned upward. The nurse states that its duration was about two or three minutes and that he was apparently unconscious. On recovering consciousness the patient found that he could use the left lower extremity as well as ever, and that sensation was normal. He felt fine, had no headache, and had not bitten his tongue, nor had an involuntary urination. His skin was very much flushed for several minutes following this attack. I saw him at 3 p. m. and found sensation of the left leg normal and the superficial plantar reflex brisk and equalling the right. Muscular power of the left leg movements was not quite as strong as that of the right.

On March 3 an examination shows that the left lower extremity has recovered completely, and motor power is equal to the right. The patient was now discharged as recovered, and left for his home. A recent communication reports his condition as normal.

#### CONCLUSIONS

Recently there has been a tendency among neurologists to discredit the existence of either hysteria or neurasthenia. I do admit that many cases are incorrectly diagnosed as hysteria or neurasthenia, and that a closer analysis or a more careful examination would change the diagnosis. After observing the course of this case I can see nothing but proof of the correctness of my diagnosis.

Some may object to diagnosing hysteria in the male. Although not so frequent in men and children as in women, a certain number of cases occur. I have seen a girl aged 6 with a typical hysterical gait.

The seizures in the boy as well as in the father were undoubtedly hysterical rather than epileptic.

The past few years has brought forth voluminous discussions regarding the true etiology of hysteria. Freud and a number of prominent supporters believe that the sexual field offers an explanation for all cases of hysteria, and that there is some hidden subconscious idea of a sexual nature as the chief factor. An equally numerous and celebrated group of men vigorously assail Freud's sexual theory. Then another group is found which compromises the situation. I believe that all hysterics are dependent on perverted emotions, whether conscious and recent or subconscious and more or less remote in intervening time. The sexual emotions are decidedly the most powerful of all emotions and thus we may find here the etiologic factor of the larger percentage of hysterics.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

NOVEMBER, 1911

### EDITORIALS

#### CONSERVATION OF THE PUBLIC HEALTH

The insistent demands for a National Department of Public Health are increasing with the development of the country. The necessity of protecting the health of the people increases with the increase in the density of the population. This fact, first apparent to those organizations and persons working for the betterment of the nation and the individual, is being understood by the general public.

At first the feeling that personal liberty was assaulted by these movements acted as a retarding influence, but as the education of the public progresses along these lines the opposition by the people to the establishment of such a department is growing less. Of course the "interests" affected by regulations through a department will continue to oppose all measures of this nature and the patent medicine manufacturers represented by the "League of Medical Freedom" will continue to spend money on lobbies to defeat anything that will in any way increase the supervision of their business of deceiving suffering humanity. An enumeration of the organizations favoring the creation of such a department is sufficient guarantee of the necessity for it and the good faith in which the demand is made.

In the meantime the public health agencies now organized under the National Government are hampered by the lack of men and the small pay of those employed. This is especially true of the United States Public Health and Marine-Hospital Service which is the largest and most important agency at work. Senate Bill 2117, which passed the Senate during the extra session, makes provision for a proper increase that will make the pay of those officers the same as the doctors of the Army and Navy.

The degree of responsibility and the important duties imposed on the officers of the United States Public Health and Marine-Hospital Service and the danger from exposure to the epidemic diseases, which they are constantly called on to suppress, fully entitle them to the same consideration as that given the officers of the other two medical services. The pay of the medical officers of the Army and Navy was increased some years ago while the pay of the officers of the Public

Health and Marine-Hospital Service remains the same as it was in 1889.

That the Public Health and Marine-Hospital Service has fully justified its existence can easily be proved as follows: During the forty years since its reorganization in 1870, the nation has expended on the Service for salaries not more than \$8,000,000; during 100 days of the yellow fever epidemic in New Orleans in 1905 it saved the nation a hundred million dollars as compared with the parallel conditions of 1878 which caused a loss of more than a hundred millions in the Mississippi Valley. In combating and conquering the plague among the Chinese population in San Francisco it has accomplished a feat never excelled. The Service has, by precept and example of cool-headed, scientific management, done much to remove the fear of small-pox from the country.

It has done and is now doing in its hygienic laboratory at Washington some of the world's best and most advanced work in scientific research as to the cause and prevention of disease. It is making great advances in our knowledge of leprosy, typhoid fever, hook-worm disease, pellagra and many other diseases. It has given to the Philippines the very best health protection they ever had.

In addition to all these things, the Corps annually treats over 55,000 sick seamen and inspects about 1,280,000 immigrants yearly, besides conducting all the national quarantine stations on the coast of the United States. It covers all the quarantines in the outlying territory such as the Philippines, Hawaii, Porto Rico, Canal Zone and Alaska, and keeps up a vigilant and effective sanitary inspection in many foreign ports. The Service inspects, all told, more than 3,000,000 persons annually.

Asiatic cholera is at the present time a serious menace to the lives, health and business interests of the people of this country. The officers of the Public Health and Marine-Hospital Service now guard most of the portals through which this dread disease is likely to enter. They constitute the sole national agency which would be concerned in the eradication of cholera should it be introduced.

In view of these facts there can be no question of the necessity for maintaining the efficiency of the Service, nor of the urgent advisability of increasing that efficiency to the highest possible degree. The amount of money needed to provide the increased pay is insignificant in comparison with what a widespread outbreak of cholera would cost our nation.

#### SEX HYGIENE

The question of sex hygiene possesses proportions that are formidable. It has always possessed them and will continue to menace for long



to come. It is one of the mysterious marvels of the ages that the question of the sex functions of the personality should be taboo; that it should be a question at all where a duty so universal is involved. But the traditions of the problem are hoary and eternally prohibitive. In one age it awes because it is held sacred, in another it forbids contemplation because it has become unholy; but always the eyes fall before it and the cheek protests.

As a concomitant condition each generation shoulders its tale of disease and corruption—positive sorrow that tears cannot comfort. The curse is as broad and its jurisdiction as comprehensive as Ernulphus' anathema; it knows respect for no man, no woman, no child. Where there is an exemption it is in spite of things and on account of nothing. Gross ignorance of the sex-truth pervades all circles and the highways are full of charlatans who feed and fatten maggot-like on the body of this death.

What is to be done? The home, the institution where an inhabitant of Mars might perhaps imagine the remedy to rest, has proved inadequate. (If the remedy rests here it *rests* indeed, unawaking!) Parents are frailer than their children in approaching this subject; they are also as ignorant. Elsewhere must the propaganda be initiated. The church partakes too largely of the *zeitgeist* to be entrusted with the treasure. The numerous booklets concocted by self-styled purists endeavoring to solve the question are devoid of sense or strength and have no health in them; they inspire laughter and derision. If there remains a remedy it is far from hereabouts. Society, enriched through long culture in absurdities, is such that the vital matter is presented for consideration never at all, save under the convenient ribaldries of vaudeville where its appearance is hailed with satyric exultation as humor aborted and broached as a kind of mental dissipation.

The approach to a solution of this problem must be made indirectly. Under cover of some defense that human ingenuity is forced to conjure up, must we steal on this menace and grasp it strongly before it is aware; and one thing offers itself. Through the instrumentality of the school-room shrouded in the calm habiliments of biology we may be enabled to draw near to this hydra and with stern face, all laughter driven therefrom—for laughter would be fatal as revealing the conscious foolishness of our bravado—we may perchance conquer an ignorance which has cost the world worse than seven plagues.

In *Education* for September is a sane paper by H. E. Walter on this crucial question in which he preaches the biology plan of salvation through the high schools. This soteriology possesses at least the merit of not having been tried conclusively anywhere and its success is a chance worth playing for.

In this instance, however, the biologist must be a physician also, for the mere biologic pedagogue will not serve, since the instructor in this course must also know enough of the practical medical aspects of the question to be able to shed light on the real menace of venereal ignorance. With biology as the background on which the ealeium light of scientific instruction can play, the whole subject will cease to be arcane and become as commonplace and as simple as the rest of the curriculum.

The question will be long in solution; perhaps its ultimate reduction from mystery to common sense will never be achieved, but it challenges our effort and calls in thunder tones for a sure therapy.

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#### DINNER FOR DR. WILEY AND MEDICAL DELEGATES AT CONSERVA- TION CONGRESS

The physicians of Kansas City entertained Drs. Wiley, Evans, Work and Dowling at a dinner at University Club during the session of the National Conservation Congress. It was quite an informal affair and the time was too limited for the guests to speak of the work that the profession is accomplishing in their various localities. All except Dr. Wiley therefore declined to make any remarks and the pure food champion would have declined also, but the demand for a little talk was too insistent. Dr. Wiley has a charming personality, is large of stature and possesses a kindly spirit of good fellowship that endears him to everyone brought into close contact with him.

Dr. Wiley encouraged the physicians to continue earnestly in the philanthropic work the profession is accomplishing and declared his belief that the doctor would soon come into his own, and also that the patent medicine faker would ere long be relegated to his proper sphere—oblivion. He said:

"The case against Johnson and his cancer cure fake, appealed to the United States Supreme Court from Kansas City, was decided in favor of Johnson because the court held that the pure food law did not apply to the therapeutic claims of medicines. The vote was six to three. Justice Holmes, who should have known better since he is the son of a physician, wrote the decision. Justice Hughes wrote the dissenting opinion, upholding the contention that the phrase in the law concerning false and misleading statements applied to anything false or misleading in the statement, device or design. The Supreme Court decision was of course final and caused the Bureau of Chemistry to drop many suits for violation of the Food and Drugs Act.

"Reading between the lines of this decision it was plainly apparent that the court invited Congress to amend the act so that no offender might

escape. Acting on this hint two amendments were at once introduced, one by Mr. Shirley and one by Mr. Richardson. The Shirley amendment simply requires truthful statements of the pledges of manufacturers in all respects. The Richardson amendment goes much further and if enacted into law it will put an end to patent medicine faking. This amendment provides that no person shall make or sell drugs unless he is a registered pharmacist and no medicine may be prescribed except by a registered physician in the place where the medicine is to be sold. If put into law the traffic in drugs and medicines will be confined to registered pharmacists and registered physicians. We will kill this monster some time because the people are rapidly becoming educated to understand its menace. The man who deludes a person to believe he is being cured of a disease that is incurable is worse than a murderer. We prosecute persons who allow their relatives to die through neglect yet we put no restraint on the medicine faker who deludes people into the belief that they are being cured by taking worthless medicines.

"An effective method of combating the patent medicine fraud is for the medical fraternity in every community to prescribe simple remedies for colds and other transient and temporary ailments, and allow the druggist to put up and sell these preparations without a prescription. This would go a long way toward eradicating the last hold which the patent medicine faker has on the public because it would destroy the argument so speciously advanced that patent medicines save money for the poor person who is unable to employ a physician. Of course we know this is a false statement because it is common for the poor man to spend more money on patent medicines than he would spend if he consulted a physician and had his prescription filled at a drug store. The time is not distant when the physician will come into his own and the regular practitioner recognized as the authority in his community, and the faker and debaucher of public health will be eliminated from doing harm. The medical profession is standing by the propaganda to make this possible. It is standing by every movement for improving the sanitary conditions of the congested districts as well as in segregated districts. It is advocating every effective means of educating the people in the true principles of sanitation and prophylaxis, segregation of contagious diseases, establishment of state and national hospitals for tuberculosis, typhoid fever and syphilis, for these diseases will be segregated sooner or later just as leprosy is segregated to-day. Such isolation is doubtless hard on the individual but it is good for the public. We are getting medical inspection in the public schools with accredited physicians and dentists to look after the health and teeth of school children, and we are doing wonders in

restricting contagious diseases as well as excluding diseases brought by immigrants from foreign countries. There is a forward movement absolutely discernible to improve the physical condition of this country; this is now noticeable principally in reducing the death-rate from disease and the saving of hundreds and hundreds of men and women who a few years ago would have gone to the grave. This great work is the result of the medical profession propaganda and the people are beginning to understand that the doctors are not a trust, as the League for Medical Freedom would have us believe."

### THIRD NATIONAL CONSERVATION CONGRESS

The National Conservation Congress at Kansas City, September 25-27, was a notable gathering of men and women earnestly interested in the problems of conserving our national resources, including the health of the people. The intensity of purpose manifested by the delegates in the various phases of the work demonstrated how deep-rooted is the spirit of inquiry into means and measures for obtaining the highest percentage of productivity in every endeavor with the smallest possible loss of vitality. The congress is exerting a wonderfully potent influence in fostering this spirit and is besides a highly important factor in disseminating information concerning conservation. Governor Hadley presided during a part of the meeting and delivered one of the addresses of welcome. President Taft and William Jennings Bryan were guests and addressed the large audiences that filled the great Convention Hall.

From the medical viewpoint the most important address was the speech of Dr. H. W. Wiley on "The Health of the People." The reception accorded the doctor by the audience of 5,000 people was an ovation he will not soon forget. For five minutes the people cheered and waved hats and handkerchiefs while he smiled and bowed and waited for an opportunity to begin his address. During his speech he was often interrupted by applause as he told of the efforts of the medical profession to reduce the death-rate and increase the efficiency and lengthen the life of the human.

During his visit in Kansas City Dr. Wiley was entertained at dinner by the physicians and he made them a little speech for doctors. We tried to preserve his words and present them on another page.

The Congress adopted the following resolutions on health protection, introduced by the committee from the American Medical Association:

"We heartily approve of the work of the United States Government in improving sanitary conditions and in lowering the death-rates of Cuba, the Philippine Islands and the Canal



Zone. We are especially pleased that in 1911 the national government, through its wise provisions for the maneuver division of the United States Army operating in western Texas, has demonstrated that the achievements in health and life-security found possible in Cuba, the Philippine Islands and the Canal Zone are possible with Americans on American soil.

"We therefore call on our national, state and municipal governments to accomplish the same results for the people of the United States.

"Our national government in the Canal Zone of Panama has demonstrated that Caucasians, properly directed, can work in the tropics and semi-tropics without loss of efficiency. We express our opinion that this is one of the monumental discoveries of the age.

"The hookworm commission are demonstrating another possibility of increasing efficiency. We indorse the efforts of these and all other efforts, governmental and extra-governmental, for increasing human efficiency through promotion of physical welfare, and we call on our governments, national, state and municipal, to increase their activities along these lines.

"We favor a child welfare bureau as a part of the health department of the national government, and of each state and municipal government.

"Inasmuch as nearly all the states and most of the cities have health departments as coordinate branches of administrative work, this Congress indorses the plan of bringing together as a department of health, the various human health activities of the United States Government as a coordinated branch of its administrative work, divorced from the impediment of being a part of other administrative work of an entirely different character and conducted for entirely different purposes—this in order that the efficiency of the service may be increased to a point in some degree commensurate with its importance.

"We protest against the present neglect of health, life-security and physical efficiency, by the national, state and municipal governments, and we ask that they be given that study and care that has proved so broad an economy in the case of live-stock and farm crops.

"We deplore the practice of disposing of sewage and manufacturing waste by dumping it into the streams, lakes and coastal waters of the nation, thereby polluting the chief sources of water for drinking and domestic use, destroying fish and crustacean life and rendering the waters obnoxious to sight and smell and losing beyond hope of recovery vast quantities of elements essential to plant life.

"We earnestly advocate the employment by communities and manufacturing concerns of such methods of sewage disposal as will render the waste products innocuous to health, and utilize them in the restoration of soil fertility; and to this end we urge the enactment, by the states not

yet so provided, of stream pollution laws similar to those of the state of Pennsylvania, and by the federal government such legislation as will prevent the pollution of interstate and coastal waters.

"We are of the opinion that the national, state and municipal governments should pass proper laws and provide proper means of enforcement of such laws for the prevention of (1) blindness; (2) birth accidents; (3) infant mortality; (4) labor by immature children; (5) communicable diseases of children; (6) occupational diseases; (7) occupational accidents and especially mine and transportation accidents; (8) communicable diseases of adults; (9) bad ventilation; (10) physical inefficiency.

"OSCAR DOWLING,

"HUBERT WORK,

"E. J. GOODWIN,

"H. W. WILEY,

"H. E. BARNARD,

"W. A. EVANS, Chairman.

Committee American Medical Association.

"Members not present: A. Jacobi, Norman Bridge, Father Morrissey (represented by Father John Cavanaugh)."

#### NEW STATE ASSOCIATION JOURNALS

During the past few months three state medical associations have established monthly journals: they are Georgia, Iowa and Maine. All are creditable publications, well edited, neat and attractive in appearance and mechanical make-up.

The state association journal is a strong factor in maintaining the active interest of the members in organized medicine, promoting harmonious fraternalism and stimulating progressive professional improvement. It is a monthly record of events and happenings that concern the practitioners in all parts of the state and holds the intimate attention of the members at all times. We welcome these additions to state medical association journals and feel confident the organization in each of the states will find its work strengthened and broadened through the influence of these periodicals.

#### EDITORIAL NOTES

THE following articles have been accepted by the Council for New and Nonofficial Remedies:

Adalin (Farbenfabriken of Elberfeld Co.).

Adalin Tablets (Farbenfabriken of Elberfeld Co.).

Ferro-Sajodin (Farbenfabriken of Elberfeld Co.).

Ferro-Sajodin Tablets (Farbenfabriken of Elberfeld Co.).

Quinine Tannate (New York Quinine & Chemical Works).

Quinine Tannate (Brunswick Chemical Works).  
Quinine Tannate (Powers, Weightman, Rosengarten Co.).  
Bulgara Tablets (Hynson, Westcott & Co.).

THE county societies in the first councilor district, Atchison, Holt and Nodaway counties, held a joint meeting at Langdon on October 5 and listened to some very interesting papers and discussions by invited guests and members. Dr. Palmer Findley of Omaha, Neb., was the guest of honor. The meeting was a pronounced success as the report of the secretary, published in this issue, clearly indicates. We believe other districts would find this sort of gathering equally helpful in promoting good fellowship and in contributing to a higher degree of efficiency of the local society and individual improvement. Such meetings also will greatly strengthen and broaden the scope and influence of the state association activities in behalf of the profession and the public.

THE American Gynecological Society is endeavoring through a committee of which Dr. Barton Cooke Hirst, Professor of Obstetrics University of Pennsylvania, is chairman to induce all medical colleges to require attendance by undergraduates on at least six cases of obstetrics before graduation; and that state examining boards shall make attendance on this number a condition of licensure. "The best schools in the country," the committee says, "demand of their students personal attendance on a certain number of confinement cases before graduation, although the number is small compared with the requirements of Europe, where forty to fifty cases are required before a candidate is licensed to practice."

In Missouri the examining board requires attendance on at least five obstetric cases before graduation and all the accredited schools comply with this provision. Washington University, however, requires each student to attend ten cases; last year the average for each senior was thirteen deliveries under supervision. St. Louis University is preparing to increase the required number to ten for each student.

THE Chicago *Daily Tribune* has begun the publication, daily and Sunday, of information on health topics in a column entitled "Health Department." The column is edited by Dr. W. A. Evans, formerly health commissioner of Chicago, a teacher of medicine and a highly trained sanitarian well adapted to the work.

The St. Louis *Post-Dispatch* has given considerable space to medical subjects in its magazine section for some time, but recently the editor of this department requested the cooperation of the Missouri State Medical Association in the prepa-

ration of medical articles so as to insure the elimination of false, misleading and garbled accounts, a request that met prompt compliance by the Association.

We have long contended that the newspapers could and should do more toward molding correct public opinion on health matters than was customary with them and that it was a duty they have hitherto neglected; we are, therefore, glad to see this sign of progress in papers which enjoy such wide-spread influence among the people as do the *Tribune* and the *Post-Dispatch*. Other newspapers are bound to take an interest in health matters sooner or later, for it is one of the most important functions of the press to disseminate correct information to the masses of the means and methods to prevent disease, to increase human efficiency and to lengthen life.

MISCELLANY

AMERICAN MEDICAL ASSOCIATION  
NEWS

APPOINTMENTS ON COMMITTEES

Dr. John B. Murphy, president of the American Medical Association, has made the following appointments on committees for 1911-1912:

COMMITTEE ON TRANSPORTATION AND PLACE OF SESSION

(To complete the Committee, in addition to J. Rawson Pennington, Chairman, elected by the House of Delegates.)

- Thomas J. Murray.....Butte, Mont.
- William L. Brown.....El Paso, Tex.
- James P. Hutchinson.....Philadelphia
- William E. Anderson.....Farmville, Va.

COMMITTEE ON NOMENCLATURE AND CLASSIFICATION  
OF DISEASES

- Alembert W. Brayton.....Indianapolis
- (Vice Victor C. Vaughan, resigned.)

COMMITTEE ON ANESTHESIA

- George Emerson Brewer, Chairman....New York City
- Thomas W. Huntington.....San Francisco
- Yandell Henderson.....New Haven, Conn.
- Fred T. Murphy.....St. Louis
- E. Denegre Martin.....New Orleans

COMMITTEE ON ESTABLISHMENT OF PHYSICIANS'  
SANITARIUM

- Edward Jackson, Chairman.....Denver
- Alexander C. Magruder.....Colorado Springs, Colo.
- Joseph Yates Porter.....Jacksonville, Fla.
- Algernon T. Bristow.....Brooklyn
- Fitch C. E. Mattison.....Pasadena, Cal.

COMMITTEE TO FORMULATE AMENDMENTS TO THE CON-  
STITUTION AND BY-LAWS TO EXTEND MEMBERSHIP

- D. S. Fairchild, Chairman.....Clinton, Ia.
- John W. Young.....Grenada, Miss.
- Charles S. Sheldon.....Madison, Wis.
- Horace D. Arnold.....Boston
- Jere L. Crook.....Jackson, Tenn.

COMMITTEE TO ARRANGE FOR CLINIC DAYS

- Charles L. Mix, Chairman.....Chicago
- Edward Martin.....Philadelphia



Philip Marvel ..... Atlantic City, N. J.  
 Alexander Lambert ..... New York  
 John M. T. Finney ..... Baltimore

COMMITTEE TO ARRANGE APPROPRIATE LECTURES TO THE  
 PUBLIC AT THE ANNUAL MEETINGS

William A. Evans, Chairman ..... Chicago  
 Maria M. Vinton ..... East Orange, N. J.  
 Rosalie S. Morton ..... New York City  
 Joseph S. Neff ..... Philadelphia  
 Edward Guion ..... Atlantic City, N. J.

COMMITTEE TO INVESTIGATE THE ADVISABILITY OF PUB-  
 LISHING A HEALTH JOURNAL

Joseph N. McCormack, Chairman ..... Bowling Green, Ky.  
 George A. Moleen ..... Denver  
 Edward E. Dorr ..... Des Moines, Ia.  
 George T. Palmer ..... Springfield, Ill.  
 Park W. Willis ..... Seattle, Wash.

COMMITTEE TO INVESTIGATE THE ADVISABILITY OF PUB-  
 LISHING A HEALTH JOURNAL

William A. Evans, Chairman ..... Chicago  
 Benjamin R. McClellan ..... Xenia, O.  
 Seale Harris ..... Mobile, Ala.  
 Gardner T. Swarts ..... Providence, R. I.  
 Francis E. Fronczak ..... Buffalo, N. Y.

COMMITTEE TO CONSERVATION CONGRESS

The President has created and appointed the follow-  
 ing Committee to Represent the American Medical  
 Association at the Third National Conservation Con-  
 gress:

William A. Evans, Chairman ..... Chicago  
 Abraham Jacobi ..... New York  
 Hubert Work ..... Pueblo, Colo.  
 Norman Bridge ..... Los Angeles, Cal.  
 Oscar Dowling ..... Shreveport, La.  
 The Very Rev. Andrew Morrissey ..... South Bend, Ind.  
 —From *The Journal A. M. A.*

PROCEEDINGS OF THE STATE BOARD  
 OF HEALTH

The State Board of Health convened in the  
 parlors of the Coates House at Kansas City,  
 September 27, for the purpose of conducting trial  
 cases and conducting such other business as  
 might be presented.

A committee of the board, on September 25,  
 26 and 27, conducted examinations for license to  
 practice medicine, surgery and midwifery. All  
 members were present on the 27th, with the  
 exception of Dr. Schulz. Dr. Robinson, the presi-  
 dent, called the board to order at 10 a. m.

The Dr. Emil Dargatz case was here called.  
 The doctor was present and was represented by  
 counsel in the person of James G. Smith.  
 Charges were read. On the part of the prosecu-  
 tion a copy of a court record was introduced.  
 This concluded the evidence, the defendant not  
 introducing any testimony. On motion further  
 consideration of this case was deferred until a  
 later hour during the meeting.

The Dr. James O. Lee case was next called.  
 Dr. Lee was not present but was represented by  
 his attorney in the person of Mr. Lowe. The  
 charges were read. On the part of the prosecu-  
 tion, Mr. G. A. Leonard was introduced and

examined. The prosecution likewise introduced  
 Mr. Frank Frazier as a witness who was duly  
 examined. The defense offered no testimony.  
 On motion this case was taken under advisement,  
 a conclusion of the board to be reached at a later  
 hour during the session.

Dr. William H. Smith here presented himself  
 to the board with a statement that he had two  
 sons studying medicine, both of whom had  
 received their freshman year during the term of  
 1908 and 1909 in the Eclectic Medical College  
 and that they had since received two courses at  
 the University Medical College. The doctor  
 asked if the board would permit his sons to  
 matriculate in the University Medical College in  
 this year's senior class and that in the event they  
 graduated next spring, would they be privileged  
 to take the examination before the board. After  
 listening to the doctor's statements and review of  
 the case, it was ordered that these gentlemen  
 would be required to pursue their medical course  
 two years longer and that no credit would be con-  
 sidered for work done in the Eclectic Medical  
 University. The secretary was ordered so to  
 notify the dean of the University Medical College.

The board here took a recess and reconvened at  
 2 p. m. The Dr. S. M. Clark case was first  
 called. The doctor was not present, but was  
 represented by counsel in the person of Mr. Wim-  
 mer. Charges were read. Counsel for the defend-  
 ant introduced plea in abatement, which was  
 overruled. The prosecution introduced Mr. G. A.  
 Leonard as the first witness, who was duly exam-  
 ined. Mr. Frank Frazier was next introduced  
 as a witness. The defense presented no testi-  
 mony. This concluded the evidence in the case,  
 and further action in the matter was postponed  
 until a later hour during the meeting.

It was ordered that the Dr. Ed. J. Boyer case  
 be postponed until November 20. Drs. Foster  
 Ackley and F. W. Lanoix having enjoined the  
 board, it was ordered that the cases against these  
 men be postponed.

The minutes of the previous meeting were here  
 read and approved.

The committee on college inspection introduced  
 the following reports, which were adopted by the  
 board, all members voting for the adoption, with  
 the exception of Dr. Upshaw, who voted "No"  
 against that portion relating to the Eclectic  
 Medical University.

Jefferson City, Missouri, Sept. 17, 1911.

*Mr. President and Members of the State Board of  
 Health, Sirs:*

Your committee appointed for the purpose of visit-  
 ing and inspecting the Medical Schools of Kansas City,  
 Mo., beg to submit the following report:

The University Medical College recently reorganized  
 purporting to be an advanced school of medicine,  
 whereby only Junior and Senior courses will be con-  
 ducted, with intern and postgraduate facilities con-  
 nected. Being not yet completed, your committee is  
 unable to make a complete report until we are satis-  
 fied that the intention and agreement of signed state-

ment made by the officials of said institution, herewith attached, shall have been fully carried out.

It is the opinion of your committee, that if said agreement is complied with, the University Medical College will be fully equipped and will stand as a first class accredited school.

Kansas City, Mo., 9/7/1911.

To the Honorable State Board of Health of Missouri.

Gentlemen: Your request of September 4 at hand. In reply will write you what was stated to your board while investigating the conditions of our school last August 29.

The trustees and faculty of the University Medical College are establishing a Clinical and Post-Graduate School. We are demanding from each student before admission the requirements of the State Board of Health, the Association of American Medical Colleges and the Committee on Education of the American Medical Association. We will take only the students from recognized medical departments of universities and medical schools that come with credentials showing that they have met the preliminary requirements for admission and have satisfactory grades from said schools for Freshmen and Sophomore years.

We expect also to admit the eligible students, that is Juniors and Seniors who have made the grades, etc., at the University Medical College, eliminating those who entered from Eclectic School last year.

You have sent us the latest requirements of your Honorable Board, which we intend to live up to, both in letter and spirit. You have inspected and approved our laboratories which we expect to make second to none in the West, and in addition to them we are now establishing a fully equipped and modern x-ray and Electro-Therapeutics outfit, making the equipments for diagnosis, therapeutics, etc., up to date and giving the student an additional advantage that is not ordinarily taught in the last two or clinical years of a medical college.

We will also establish an elective third year hospital course where the student will be required to serve in one or more of our several hospitals a full year before graduation.

The following hospitals and out-door clinics will be open to our students:

- The University Hospital.
- The City Hospital.
- The German Hospital.
- The St. Mary's Hospital.
- The South Side Hospital.
- The Willows Hospital (Maternity).
- The Florence Crittenden (Maternity).
- The University Medical College Out-Door Clinic.
- The Helping Hand Institute.
- The Swope Settlement Clinic.

Knowing that it is not your desire to retard in any way higher medical education by unreasonable restrictions but on the other hand at all times to encourage by cooperation and suggestion the medical schools under your jurisdiction, we have earnestly solicited your approval in this future work and beg to remain,

Very truly yours,  
UNIVERSITY MEDICAL COLLEGE,  
SAM'L C. JAMES, Dean.

Your committee next visited the Homeopathic Medical College (Hahnemann). This institution is poorly equipped, especially in the chemical, physiological and anatomical laboratories. The library is far underneath the standard; the lecture and clinical rooms are uncouth and dirty.

We have no criticism to offer against the faculty, but we are of the opinion from the number of students enrolled and that few paid teachers are on the list, that the school is not self-supporting and is gradually going down.

This being the only homeopathic school in the state, your committee hesitates to place it upon the discredited list. Therefore we recommend that the dean of the college be notified, that unless general improvements in all departments are made within thirty days the school will be discredited.

Your committee next visited the Eclectic Medical College and found conditions unimproved or changed for the better since our last inspection.

This school being on the discredited list with no apparent improvement for the better, your committee has nothing further to offer in its behalf.

Very respectfully,

F. B. FUSON, Chairman.  
FRANK B. HILLER,  
M. P. OVERHOLSER,  
L. E. BUNTE,

Committee.

KANSAS CITY, Mo., Sept. 27, 1911.

Pursuant to a resolution adopted at a meeting of the State Board of Health held in Kansas City, August 29, your committee on college inspection visited and made thorough inspection of the American Medical College, the Barnes Medical College and the College of Physicians and Surgeons, all of St. Louis, on Sept. 11, 1911.

The American Medical College was the first college visited. An examination of its records revealed the fact that same were splendidly kept and that a systematic record of obstetrical and dispensary cases were kept in the office of the secretary of the school.

All laboratories were found to be equipped as demanded, in the requirements exacted of medical colleges.

There were but two defects found in the school upon which we desire to report unfavorably. One of these is that, in the chemical laboratory, there is an absence of a hood for the purpose of ventilation and carrying off fumes. This matter was brought to the attention of a member of the faculty, which member assured us that this inadequacy would be promptly corrected.

Among our requirements is one that medical colleges shall have installed in the college building, a library consisting of modern text-books on the subject of each department taught in the school. It is also required that there shall be in the library current medical periodicals. An examination of the library of this school reveals the fact that same is composed of some five or six hundred old volumes, but there is an insufficient supply of modern text-books. Current periodicals, however, were found to meet the requirements of the board.

Your committee desires to recommend that the American Medical College continue to be regarded as an accredited medical school, with this proviso, that the college at once install a hood in the chemical laboratory and that the library shall be equipped with a more complete set of modern text-books.

From this college your committee proceeded to the College of Physicians and Surgeons and there made an inspection which revealed the following conditions:

An examination of the records of the students of this school revealed the fact that in the class of 1911, one Dora Pallakoff was graduated. She was admitted to advanced standing in this school and credits given for one course pursued in the Hippocratean Medical College, now defunct. This was done in opposition to a ruling this board made with reference to credits that should be given those who had attended this night school to-wit:

All students who had attended three courses in the Hippocratean school should be allowed credit for two courses; those who had attended two courses should be allowed credit for one course, while those who had attended but one course at the Hippocratean school should not be allowed credit for any time.

However, we will state that the board adopted a resolution prior to this last one, allowing those who



had attended this school credit for hours only but not for a full course. An examination of Miss Pallakoff's credits for hours in the Hippocratean School showed that she had not attended the required number of hours as set forth in our requirements, even had we adhered to this first resolution and allowed credits for hours. In other words, the Physicians and Surgeons College gave this matriculant credit for one whole term, contrary to our resolutions and requirements, and admitted to advanced standing a student coming from a partially accredited school.

Upon visiting the library we found a large number of old text-books but not one modern text-book dealing with any subject taught in the departments of the school. Neither was there to be found in the library any current medical periodicals. Upon visiting the anatomical department we found the only entrance into the laboratory was by passing out of a window from one room upon a fire escape or a narrow iron balcony and from this balcony entering through a window into the laboratory. This laboratory was found to be exceedingly dirty and kept with apparently no idea of even approaching sanitation.

No preserved anatomical specimens were to be found. Upon requesting to be shown unmounted skeletons for use by students we were directed to a quantity of bones strewn upon the floor. These bones were largely vertebrae and ribs. The dean of the school informed us that the college possessed no skulls. Upon visiting the chemical laboratory we found this room to be poorly kept and in a dirty condition. No hood for the purpose of ventilation and carrying off fumes exists in the laboratory.

Throughout the college in all the laboratories, lecture rooms and corridors, there was to be found very evidence of dirt and an insanitary condition.

Upon inquiring at the secretary's office for the dispensary and obstetrical records we were informed that the same were not available. In concluding our statement with reference to the College of Physicians and Surgeons, we recommend that this school be regarded by the Missouri State Board of Health as a discredited institution in medical teaching, and that the same be discredited because of the inadequacies pointed out above, and because of the further fact that the school gave advanced credits to a student coming from a college not fully credited.

From this college your committee proceeded to the Barnes Medical College and made investigation of this institution. Throughout the building every evidence existed of a dirty, unkept condition.

We first visited the office and made an examination of such records as were available. We found that in last year's senior class there were fifty students and that for this number of students there were but seventy-six cases of obstetrics provided. Our requirements are that every student in the senior class shall have actual charge of five maternity cases. Had that requirement been met by the college, it would have necessitated the class having a total of two hundred and fifty cases and that every student should have had five cases under his care, under the supervision of an attending physician.

On examining the records of the dispensary we found that during the term of 1910 and 1911 there were 1,304 cases under the control of the college and that with repeated visits there was a total number of visits at the dispensary of 7,097. This number does not meet the requirements of our board, which are that for each senior class of 100 students, or less, there shall be an average daily attendance of sixty cases at the dispensary. We also found no records of cases as kept by the individual dispensary physicians but that all records are filed in the office of the college.

We find that the college is without many necessary apparatuses for properly teaching medicine. It was noted that the school does not possess a stereopticon, a reflectoscope and many apparatus necessary in teaching.

Upon visiting the anatomical department we found there was an absence of preserved anatomical specimens. So far as the matter of a supply of unmounted skeletons is concerned, we found a sufficient number of long bones but no skulls were to be found.

In view of the numerous inadequacies and deficiencies as pointed out above, we recommend that this school be not regarded as an accredited institution by the Missouri State Board of Health.

In concluding this report, we further recommend that the inadequacies found at the American Medical College be reported to the dean of that institution, with the request that same be corrected and that if they are corrected the students of the class of 1911 and 1912 will be regarded by this board as students having received a course from an approved college.

So far as the college of Physicians and Surgeons and the Barnes Medical College are concerned, we recommend that these schools be notified by the secretary of the board, that they are discredited by this board and that their students will not receive credits for courses pursued during the year 1911 and 1912. We recommend that the students of these institutions, through the public press and other means of publicity, be notified of the standing we have given these schools and that they be informed that they will not receive credit for work pursued during the course of 1911 and 1912.

Respectfully submitted,

FRANK B. HILLER,  
IRA W. UPshaw,  
F. B. FUSON,  
L. E. BUNTE.

At 6 p. m. the board took a recess until 8 p. m.

On reconvening, a motion was offered by Dr. Overholser that Dr. Emil Dargatz be found guilty as charged. The motion prevailed. Upon motion by Dr. Hiller, the license of Dr. Dargatz was revoked for a period of ten years.

Dr. Overholser, in the Dr. James O. Lee case, offered a motion that Dr. Lee be found guilty as charged. This motion prevailed. On further motion by Dr. Overholser, the license of Dr. Lee was revoked for a period of ten years.

Dr. Fuson made a motion that Dr. S. M. Clark be found guilty as charged. This motion was adopted. On further motion, by Dr. Fuson, the license of Dr. Clark was revoked for a period of five years.

A resolution was here introduced and adopted by members of the board, instructing the secretary to invite officials of all railroads of the state to meet with the board at its next meeting to discuss and seek the support of the railroads in the removal of public drinking-cups, public towels, and public hair brushes.

It was further ordered that the secretary invite, at a meeting to be held on about the same date, a committee representing the State Medical Association, the Association for the Control and Prevention of Tuberculosis, the Board of Managers of the Mt. Vernon Sanatorium, and others officially interested in the suppression and control of tuberculosis and other communicable diseases, the purpose in view being that a concerted effort, by all these bodies, might be brought about looking to the accomplishment of the same ends.

FRANK B. HILLER, M.D.,  
Secretary, State Board of Health.

## LET CONGRESS INVESTIGATE THE "MEDICAL TRUST"

In the Medical Economics Department<sup>1</sup> appears an open letter from Mr. George P. Hampton, secretary of the Conference of Progressive State Granges, to Senator John D. Works of California. Mr. Hampton's letter is worthy of note for two reasons: First, it definitely and officially contradicts the statement made by Senator Works, in his astounding speech in the United States Senate in defense of Eddyism, that the National Grange had repudiated its endorsement of a national department of health. Mr. Hampton proves that the National Grange really reaffirmed its previous endorsement. Second, the letter contains in its closing paragraphs the following pertinent remarks:

"Christian Scientists fear the consequences that would follow the enactment of such legislation as the Owen bill proposes. If that fear is well founded, and your belief that the American Medical Association is a medical trust is well founded, is it not time that the country knew these and all the facts relating to this burning question? What possible better means have we than a rigid Congressional investigation by a committee specially organized for that purpose? The House of Representatives, as at present constituted, is believed to be honestly desirous of serving the people. It is investigating the trusts, probing into the expenditures of the various departments of the government, and why should it not have a committee on health and thoroughly investigate this matter of such vital importance to all the people. Surely the Christian Scientists are not opposed to honest investigation by a committee having power to probe every charge and countercharge to the bottom."

Mr. Hampton's position is a thoroughly sound one. If the American Medical Association is a "trust" or if it is endeavoring to create a trust, certainly the people should know it. If the physicians of the country are seeking a health department so as to create positions for themselves, and not to stamp out disease and save human lives, the public should know it. On the other hand, if the American Medical Association and the medical profession are earnestly and honestly striving to increase our knowledge of the cause and means of prevention of epidemics and to wipe out preventable disease, then the people should know this and should lend their aid in this life-saving campaign. As Mr. Hampton says, "Why should it (the House of Representatives) not have a committee on health and thoroughly investigate this matter?" Why should not the work of the American Medical Association be investigated? Why should not Congress be able to tell the American public the truth? Surely the needless loss each year of 600,000 lives is of as vital importance to the people as the price of sugar, tobacco or steel rails. Will Congress "investigate" the American Medical Association and its work? If it will, the books and records of the Association will gladly be pro-

duced and its officers and members will willingly testify, nor will any order from the courts be necessary to insure their presence. Investigation and credit for the work it has done and is now doing is exactly what the Association most desires, since it knows that the more the people know of its work for the public good, the more it will enjoy the confidence and support of the public.—*The Journal A. M. A.*

## RELIGION AND QUACKERY

For years the religious press reeked with unsavory advertisements of nostrums and quacks of varying degrees of fraudulency and indecency. Public opinion finally forced the more influential church papers to throw out this class of advertising and to-day, except for some of the more insignificant publications, the religious journals are practically free from the blight of "patent medicine" advertisements. That quackery still seems to possess a peculiar fascination for the clergy, however, was recently shown in an episode that occurred at Kansas City, Mo. That city is the unfortunate possessor of a quack named Carson — Hiram Carson, or as he calls himself, "Dr. C. H. Carson." This charlatan has grown rich, thanks to a venal press and the large supply of gullible sick. He used to "treat" by means of "vital force," developed by rubbing his victims with vaselin mixed with red pepper. The tingling produced by the red pepper was, he assured his dupes, the "vital force." Later he improved on this "treatment" and had his assistants give out slips of tissue paper that he had "magnetized." These slips the patients were instructed to pin on their nightgowns between the shoulder-blades! Carson is now operating what he calls the "Temple of Health," and advertising heavily. As a means of drumming up trade Carson occasionally gives elaborate "receptions" at his "Temple of Health," to which the curious are invited. A little while ago a meeting of this kind was held at which, as a crowning advertising stroke, Carson got the pastor of one of the leading Congregational churches of the city — the Rev. J. B. Silcox — to give an address! This address and other details of the "reception" occupied nearly two columns in the Kansas City papers of the following day, and although a paid advertisement, the article was set up in news-matter style. Why a reputable minister of the gospel, whose own church membership is strictly high-class and, we are informed, includes some of the best-known medical men of the city, should endorse such a blatant quack as Carson, is a mystery. Every intelligent layman in Kansas City knows that Carson is a humbug and that his system is a fake. Every man in that city also knows, or could know, that Carson's only claim to the title "doctor" lies in his possession of a "diploma" from as wretched a mill as ever ground out

1. See page 210.



parcements—the American Health College of Cincinnati, long since defunct, thank heaven! If there is one class of men more than another that should stand between suffering ignorance and the machinations of the miserable harpies of the Carson type, it is the ministry. If there is one man more than another who should expose the deception and covetousness of the quack, it is the man who professes to follow the teachings of Him whose voice was always raised against shams and cheats and the cupidty of avarice. Yet we have, in the address of Rev. Mr. Silcox, the unedifying spectacle of a Christian clergyman lending the influence of his cloth and personality to further the cause of one who fattens by deceiving the sick and suffering.—*The Journal A. M. A.*

## MEDICAL ECONOMICS

### THE NATIONAL GRANGE AND A DEPARTMENT OF HEALTH

In his remarkable speech before the United States Senate, in July, Senator Works of California said that the National Grange had withdrawn its endorsement of a national department of health. In an open letter addressed to Senator Works, the secretary of the Conference of Progressive State Granges cites the official proceeding of the National Grange to show that, instead of repudiating its endorsement of a department of health, the National Grange reaffirmed its approval of the establishment of such a department. Mr. Hampton's letter is worthy of careful reading.

"Hon. John D. Works, United States Senate, Washington, D. C.

"DEAR SIR.—I have read with great care your speech opposing Senator Owen's bill to establish a department of health, as published in the *Christian Science Monitor* of July 11.

"You support your argument with quotations from various authorities, among them resolutions purporting to have been forwarded by C. M. Freeman, secretary of the National Grange, showing that the National had completely reversed its position. If Mr. Freeman forwarded such resolutions in the form in which you have published them, he knowingly misrepresented the action of the National Grange, and his action will undoubtedly be investigated by that body at its next annual meeting.

"To prove to you that the Grange position endorsing the establishment of a federal bureau of public health was not reversed by the National Grange at Atlantic City, or by any state granges of large membership at their state meetings of later date, I submit:

"(a) Page 167 of the official proceedings of the Atlantic City session, containing the introduction of the general report of the Committee on Resolutions, the opening part of which reads as follows: 'We reaffirm the resolutions and declarations of the general report of the Committee on Resolutions, made and unanimously adopted at the forty-third annual session, held one year ago at Des Moines, Iowa, on public health bureau, on home economics, on tariff revision,' etc.

"(b) The April, 1911, issue of the *Michigan Patron* (the official organ of a number of state granges, aggregating a large percentage of the total grange membership) contains an editorial, 'The Grange Position on Public Health,' in which a statement made in a circular letter by the League for Medical Freedom, that the Grange had reversed its position on public health, is reviewed at length and proved not true. This proof, you will note, includes resolutions by the National Grange and editorials by the national master.

"(c) A copy of the health resolutions adopted by the Maine State Grange at its annual meeting in Augusta, Dec. 20-22, 1910. The points in these resolutions to which I especially desire to call your attention are: 'That we reindorse the establishment of a federal bureau of public health, as set forth in the resolutions adopted by the National Grange at the forty-third annual session at Des Moines, Iowa, Nov. 10-20, 1909, provided that such legislation properly safeguards the rights of all schools of medical practice,' and 'That the Conference of State Granges is urged to take such action as may be expedient to unite all farmers in supporting a public health policy in the interests of all the people, and that the conference appeals to all public-spirited citizens to unite with the farmers in this important work.'

"You will notice from the above (a) that the first of the public measures re-indorsed by the National Grange at Atlantic City was the action of the Des Moines meeting in 1909, on public health. I submit the resolution thus emphatically re-indorsed:

"Resolved, That the National Grange favors the establishment of a national health bureau or commission, and urges on Congress the necessity for the immediate enactment of legislation for this purpose.'

"I sincerely believe you would not willingly help to place the Grange in a false light before the country, but I feel you have been misled, and have unwittingly been made the means by which this has been done. And as your speech has been given wide publicity in the *Congressional Record* and in the public press, I address this open letter to you in order that the true position of the Grange may be placed before Congress and the people.

"For the honest opposition of yourself and the Christian Scientists in general, I have the most sincere respect; but it is the opposition which seeks to gain its object by tricks and misrepresentations, and by exciting the fears and prejudices of the people, which convinces us that back of all the honest opposition—and no doubt unknown to it—are the same interests that are fighting the pure food laws, and which, even at this writing, hope to succeed in forcing Dr. Wiley out of office.

"It is this opposition which we feel should be forced out into the open, where its nature can be fully understood. If this is done, it will at once remove much of the present misunderstanding, and Christian Scientists and all who sincerely desire honest medical freedom should assist in accomplishing this.

"Christian Scientists fear the consequences that would follow the enactment of such legislation as the Owen bill proposes. If that fear is well founded, and your belief that the American Medical Association is a medical trust is well founded, is it not time that the country knew these and all the facts relating to this burning question? What possible better means have we than a rigid Congressional investigation by a committee specially organized for that purpose?

"The House of Representatives, as at present constituted, is believed to be honestly desirous of serving the people. It is investigating the trusts, probing into the expenditures of the various departments of the government, and why should it not have a committee on health and thoroughly investigate this matter of such vital importance to all the people. Surely the Christian Scientists are not opposed to honest investigation by a committee having power to probe every charge and countercharge to the bottom.

"The farmers want the facts and a square deal for all the people—Christian Scientists and all schools of medicine included—and Christian Scientists should join with them in their present efforts to get Congress to appoint a committee on public health and promptly institute a thorough investigation. Farmers and Christian Scientists should not work at cross-purposes

on so important a matter. Honest investigation by Congress is the way to bring them together, and I appeal to you to use all your influence to bring this about.

—GEORGE P. HAMPTON.

*"Secretary, Conference Progressive State Granges."*

—From *The Journal A. M. A.*

## DEDICATION OF THE NEW BUILDING OF THE STATE SANATORIUM FOR TUBERCULOSIS

A large assembly of state officers, physicians and other citizens gathered on the sanatorium ground at Mount Vernon, October 8, to dedicate Hadley Hall, one of the new buildings for the care of incipient cases of tuberculosis.

The new building is constructed of brick and concrete. Every veranda faces south at such an angle as to receive the full effect of the sun at certain hours. Inclines take the place of stairways and the water, electric, telephone and signal services are all completed.

The special dedicatory meeting convened at 3 p. m. Dr. E. W. Schauffler, president of the board of directors, presided.

Dr. William Porter, medical director, said:

The cornerstone of the Gupton Villa was laid Aug. 15, 1906. Since then we have admitted 630 patients. In each one of these, the diagnosis was assured by the best-known tests. By correspondence and careful interrogation we can conscientiously estimate our cures at 150 and arrested cases 220. There are now with us eighty-one cases and our capacity with the new building is 150. Thus we have knowledge of 451 cases.

The aggregate cost of all buildings and maintenance has been about \$450,000, of which \$225,000 is in permanent construction. The legal value of human life in Missouri is \$10,000. In cures alone, therefore, we have turned back to the state the value of \$1,500,000, as against \$175,000, to say nothing of arrested cases, the cases under care, teaching better living and the fact that tuberculosis can be cured here in the home and advancing the great cause of prevention of disease.

Governor Hadley's desire for an appropriation for educational work was realized and by this means the board has arranged to distribute 25,000 copies of a booklet on consumption to every physician, teacher and editor in the state, to be followed by other publications. Other features are the school for children conducted by Mrs. English and our library and stereopticon apparatus.

Much of the credit is due to our local officers, whose work done under the direction of Dr. Stewart and Dr. English is high class and effective. The directors have had days of worry, unjust criticism and too small appropriations, but these are past, for all things come to him who will but wait. It only remains for me to thank Governor Hadley and his associates for their great and well-known help in this cause.

Dr. Goodier of Hannibal, President of the State Medical Association, spoke of the needs of the state for such an institution and his pleasure in seeing so large and complete a plant. He said the medical profession of the state would unitedly support the work and wished that every member of the Association could see the Sanatorium as he saw it to-day.

Hon. A. A. Speer spoke of the value of the State Antituberculosis Society as another factor in the fight against consumption. His knowledge of this branch of public beneficence and his official position in it, entitled him to speak with authority. To him more than to any other one man, except the Governor, is this Society looking for direction and definite plan.

Governor Hadley dwelt on the great good the people at large were receiving, not only the 630 patients treated in the Sanatorium in the last six years, but to the masses who never go to the Sanatorium. The Governor said, in part:

The completion of a new building of a state institution is usually not an event of sufficient importance to justify the public ceremonies incident to an official dedication.

But when, as in this case, the building to be dedicated is a part of an institution devoted to the treatment of a disease which levies a heavier tribute than any other upon human life and strength and health, then does the question become one of sufficient importance to justify the bringing together of the people for a public ceremony, which it is hoped will accomplish the useful purpose of calling attention to the importance of the work the state is endeavoring to accomplish.

Between 5,000 and 6,000 persons die from tuberculosis in Missouri each year. Out of every ten deaths one is caused by this disease. The loss of life each year from tuberculosis in Missouri is double the loss of life suffered by all our soldiers and sailors from wounds and disease who took part in the war with Spain.

Between 25,000 and 30,000 Missourians are totally or partially incapacitated for useful labor or occupation by reason of this disease. And the annual economic loss suffered, taking into consideration the cost of nursing, medical attention, medicine and loss of earnings, amounts to \$30,000,000 each year.

In this calculation is not included the financial loss to the State through the emigration of those who seek other climates regarded as more favorable for their treatment and cure.

In addition to the financial loss incurred, there is the loss to the people through death and incapacity that cannot be estimated in dollars and cents. And yet Missouri is spending this year only \$98,200 for the prevention and cure of tuberculosis which is only about three-tenths of 1 per cent. of the annual economic loss incurred.

While tuberculosis is the most deadly of diseases, it is fortunately also one of the most curable. And experience has shown that one can be almost as effectively cared for and make as satisfactory progress in combating disease in his own home, under a proper system of treatment and carefully regulated habits of life, as he can in a state institution.

All that the state can do is to point the way. Experience not only here, but elsewhere, shows the death-rate from this disease not only can be, but is being rapidly reduced.

The problem demands the organized activity of the American people, and in this work the people of Missouri should leave no question as to their willingness and their ability to do their part.

Mr. McPherson, Circuit Attorney for Lawrence County, spoke both as a county officer and a private citizen of his knowledge of the Sanatorium. His tribute to the Governor and his



appointees to carry on the work was in itself a recompense for time and labor expended.

The day was a memorable one in that it told of things accomplished. May the good work continue.

## NEWS NOTES

DR. FERIE SMITH, Springfield, has been appointed local surgeon for the Frisco Railroad.

DR. T. O. KLINGNER, Springfield, has been appointed oculist and aurist of the Springfield Children's Home.

DR. CHARLES F. GREEN, Poplar Bluff, has resigned as county physician and will depart for the Ozark Mountains on account of his health.

THE health department in St. Louis secured another conviction for practicing medicine without a license when Franz Wild was found guilty of this offense and fined \$50 and costs in the Court of Criminal Correction.

DRS. R. M. HARDAWAY, C. R. Castlen, Omar H. Quade and C. M. Watson of St. Louis have been appointed surgeons in the United States Army. They have gone to Washington where they will study in the Army Medical School preliminary to entering active service.

THE crusade against impure milk sold in St. Louis and Kansas City continues. About forty dairymen, grocers and restaurant proprietors have been arrested and many of them fined in St. Louis for selling milk below the standard. In St. Joseph the milk dealers are preparing an amendment to the milk ordinance so as to compel farmers to have cows subjected to the tuberculin test.

THE Central Council of Social Agencies, St. Louis, is an organization recently formed for the purpose of securing cooperation in charitable and philanthropic endeavors. About forty charity organizations were represented at the organization meeting. It is thought this centralization of effort will increase the efficiency of charitable work in the city and prevent duplication of labor in behalf of worthy persons.

THE state board of health has placed the Barnes Medical College and the College of Physicians and Surgeons, both of St. Louis, on the discredited list, for a recent inspection disclosed numerous deficiencies at both colleges. The board also revoked the licenses of several Kansas City

physicians who had been found guilty of criminal practices by the U. S. Postoffice Department. A report of the board meeting is published in this issue, page 206.

DR. W. S. WHEELER, Health Commissioner of Kansas City, was exonerated by the health board of all charges of favoritism and unfair treatment brought against him by the milk producers association. The report praises the work of Dr. Wheeler and says there was no lack of diligence on his part but that, on the contrary, the city is receiving a higher grade of milk than was supplied before the health commissioner started the campaign for pure milk.

THE twenty-fourth annual meeting of the Medical Society of the Missouri Valley was held in Omaha, Neb., on September 7 and 8. The president, Dr. Donald Macrae of Council Bluffs, spoke on the subject of "The Importance of Early and Thorough Examination of Patients." Dr. George Crile of Cleveland delivered an address on the "Psychology and Pathology of Fear in Its Relation to Surgery." Dr. L. Harrison Mettler of Chicago addressed the Society on "Sociology and Neurology."

The election of officers resulted as follows:

President, Dr. J. M. Bell, St. Joseph.

First vice-president, Dr. A. C. Stokes, Omaha.

Second vice-president, Dr. S. Grover Burnett, Kansas City.

Secretary, Dr. Charles Wood Fassett, St. Joseph (reelected).

Treasurer, Dr. O. C. Gebhart, St. Joseph.

Next place of meeting, Hotel Colfax, Colfax Springs, Iowa, March, 1912.

THE St. Louis *Republic* comments appreciatively on the address of Dr. Wiley at the City Club on September 21. The *Republic* said:

"Dr. Wiley in the Twentieth Century and Pierre Laclede in the Eighteenth spoke of the future of St. Louis in much the same tone. The founder of this city expressed the hope that on the chosen site might grow up 'one of the finest cities on the American Continent'—not the largest nor the richest, necessarily, but a community putting quality above size. Dr. Wiley attacked the human side of the same problem in his recent address. He said the most precious thing in St. Louis was its citizenship, and that not in any symbolic sense, but as a clear matter of cost of production. The average human being, mature and able to work, has cost his parents and the state, \$12,000. The capital of all the banks and public utilities in St. Louis is but a small fraction of the worth of its citizens, from the point of view of their actual cost to humanity. Hence the conservation of men, and specially of children, is the community's first concern, and it is the successful working out of this problem that determines a city's right to be called great."

## SOCIETY PROCEEDINGS

### THE FIRST COUNCILOR DISTRICT MEETING AT LANGDON

The first district is composed of Holt, Atchison and Nodaway counties. On Thursday, October 5, the physicians belonging to the three county medical societies planned to meet at Langdon and have a love feast—intellectual and otherwise, and they did. Dr. C. L. Evans, councilor of the district, presided, and the following was the program:

First paper: "Closer Affiliation of the Members of County Medical Societies," E. J. Goodwin, M.D., St. Louis, Mo. Discussion led by Dr. Crowzen, of Nodaway county.

Second paper: "Clinical Conference in Gynecology," by Palmer Findley, M.D., Omaha, Neb. Discussion led by Dr. Postlewait, of Atchison county.

Third paper: "Manifestations and the Treatment of Typhoid Fever in Children," by Frank C. Neff, M.D., Kansas City, Mo. Discussion led by Dr. Perry, of Holt county.

Fourth paper: "Has the Catheter a Place in the Treatment of Prostatic Hypertrophy?" Chas. H. Wallace, M.D., St. Joseph, Mo. Discussion led by Dr. W. F. Schmid, of St. Joseph.

Fifth paper: "Empyema," by Dr. F. E. Bullock, of Forest City. Discussion by Dr. Robinson, of Kansas City.

Dr. Robinson also addressed the society on behalf of the State Board of Health, of which he is a member, and promised backing of the state in enforcement of sanitary rules and regulations.

Dr. Goodwin, the state secretary and editor of the JOURNAL, gave a splendid talk on how to make the county society instructive and entertaining and showed how, in this progressive age, no physician could afford to miss the meeting of his county society.

Dr. Findley, of Omaha, Neb., handled his subject like a past master, and his talk alone fully repaid every physician present for time and expense in going to Langdon.

Dr. Neff, of Kansas City, had an instructive paper on typhoid in children, and, although a young man, in years, he is a pioneer in the preventive serumtherapy methods.

Dr. Wallace's paper was listened to with a great deal of interest; the subject was thoroughly covered and brought forth several complimentary remarks. Dr. Schmid's remarks in opening the discussion were concise but to the point and showed he was also master of the subject.

Our own Dr. Bullock also had a scientific paper on "Empyema," that would have been enough for one meeting. The doctor evidently had devoted considerable time to diligent seeking of principles, which together with his experience in a number of cases, qualified him to write a paper that was worth listening to.

The intellectual feast was grand and the only regrets expressed were for those that were not there, but mine host Stone, of the Langdon hotel, realizing what he was up against, tried his best to make the gastro-nomic feast correspond with the other, and the spread he gave us was simply immense.

Plans for next year's meeting are already being discussed and it is to be hoped that every physician in the first councilor district will be there with his wife or sweetheart, for, judging by this one, no up-to-date physician can afford to miss it.

All the papers read at the meeting will be published in THE JOURNAL.

The following physicians were in attendance: E. J. Goodwin, St. Louis; C. H. Wallace, St. Joseph; W. F. Schmid, St. Joseph; Palmer Findley, Omaha; E. L. Crowzen, Pickering; W. C. Proud, Oregon; C. L.

Evans, Oregon; W. S. Wood, Oregon; D. A. Perry, Mound City; J. M. Tracy, Mound City; E. M. Miller, Mound City; Bryant Quigley and wife, Mound City; T. E. Bullock, Forest City; J. M. Davis and wife, Craig; O. W. Nauman and wife, Craig; C. T. Settle, Rock Port; A. McMichael, Rock Port; C. M. Wangeh, Tarkio; J. A. Postlewait, Tarkio; P. D. Kelly, Nimelia, Neb.; G. W. Robinson, Kansas City; F. C. Neff, Kansas City. W. C. Proud, M.D., Secretary.

### MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI

The society held its regular meeting at the City Hospital, in St. Louis, October 5. The program consisted of the following:

"Report of a Case of Subphrenic Abscess Following Acute Appendicitis," by Dr. C. D. Pichrell.

"Localized Gas-Bacillus Infection," by Dr. J. Lewald.

"Case of Defect of Left Ovary, Tube and Kidney," by Dr. George Gellhorn.

"Presentation of Interesting Specimen and Cases," by members of the corps.

### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met at Harrisonville October 12. Members present: T. W. Adair, H. A. Brierly, W. F. Chaffin, W. K. Wright, H. S. Crawford, A. R. Eldon, D. S. Long and J. S. Triplett.

The program was of much interest and the members all took an active part in discussing the papers. The following papers were read: "The Rheumides," by Dr. W. F. Chaffin. "Pellagra," by Dr. J. S. Triplett. A paper entitled "Head Pains: Their Location and Cause," was to have been read but the author was not present and as Dr. H. S. Crawford was on the program for the discussion of "Ocular Pains" the latter subject was taken up. After several points in regard to the different phases of this subject a general discussion was taken up and the members derived much information from the various thoughts expressed.

It was decided to depart from the regular form of meeting at the next regular convention and after the completion of the scientific program a nice luncheon will be served and all physicians in the county who are not members will be invited as guests. We hope also to have the president or secretary of the State Medical Association with us and address the society on this occasion.

H. S. CRAWFORD, M.D., Secretary.

### GREENE COUNTY MEDICAL SOCIETY

The Greene County Medical Society, after a two month's vacation, met in regular session Friday, Sept. 8, with the vice-president, Dr. E. F. James, in the chair. The meeting was well attended and the interest good. The work for the fall and winter was outlined and the committee on Public Health and Legislation was requested to look after fraudulent and illegal practice which is supposed to be going on in the city.

Dr. Fuson read an excellent paper on "Medical Gynecology," which was ably discussed by the members.

Dr. Pursselley reported two cases of wounds inflicted by a rabid cat. These patients are now taking the Pasteur treatment. The efficiency of the treatment as well as the utter worthlessness of the madstone was the subject of a spirited discussion.

The society meets on the second and fourth Friday nights in each month.

THOS. O. KLINGNER, M.D., Secretary.

### MISSISSIPPI COUNTY MEDICAL SOCIETY

The Mississippi County Medical Society met in regular session October 2, in the office of Dr. Vernon at Charleston.



After reading the minutes of two previous meetings and approving same the society passed on to the consideration of general business, as no papers nor cases were presented for discussion.

It was decided to elect officers for the year 1912 at this meeting so that the secretary-elect could get in his report of members for 1912 by January 1.

On motion the society remitted the county society dues and will pay one dollar of the State Association dues for each member for 1912 thereby making the dues for this year one dollar.

On motion the society decided to make a year's study of post-mortem cases. It was agreed that each member should keep a record of and report to the society upon each and every case coming under his treatment which terminated fatally, with the clinical observations of the physician attending and his treatment of the case. We hope by this means to enlist more interest in our work and to aid us in the management of cases proving intractable to present methods of treatment. The society has done very indifferent work during the past year. It has held together in fraternal good will and work along other lines and proposes to continue to do so.

The following officers were elected for 1912: President, Dr. John C. Boone, Charleston; 1st vice-president, Dr. W. P. Howle, Charleston; 2nd vice-president, Dr. G. R. Wallace, Bertrand; secretary-treasurer, Dr. F. S. Vernon, Charleston; censor, 1912-13-14, Dr. O. V. Smith, Dehlstadt; delegate to state association, 1912, Dr. H. L. Reid, Charleston.

The society adjourned to meet in regular session Nov. 6, 1911, with Dr. H. L. Reid, Charleston.

JOHN C. BOONE, M.D., Secretary.

### SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society held its regular meeting October 10, at Lancaster, Mo., President Drake in the chair.

Members present: Drs. Bridges, Drake, Gerwig, Mitchell, Justise, Keller, W. A. Potter and B. B. Potter.

Three applications for membership were carried over until the next regular meeting. Drs. Bridges, Keller and W. A. Potter were appointed on a committee to investigate the credentials of the applicants.

Several interesting cases were reported and discussed.

Drs. E. L. Mitchell, J. B. Bridges, B. B. Potter, W. B. Hight, J. H. Keller, W. H. Justise and W. A. Potter were appointed to read papers at the next meeting which will be held January 8, 1912.

H. E. GERWIG, M.D., Secretary.

### ST. LOUIS MEDICAL SOCIETY

#### MEETING OF SEPTEMBER 23

The paper of the evening was contributed by Dr. H. S. Crossen under the title "Pseudo-Hermaphrodite; Man or Woman—Which? Report of a Case of Pseudo-Hermaphroditism." Lantern slide pictures of the case were exhibited and added to the interest in the subject.

Dr. George Gellhorn opened the discussion and was followed by Drs. Hinchey, Ayars, Rassieur, Hurford and Bradley; Dr. Crossen closing. The answer to the essayist's question, we believe, was not definite. There were sixty-four members present.

#### MEETING OF SEPTEMBER 30

This meeting of the society was fully as interesting as the previous session and was highly instructive.

The program was contributed by the section on Obstetrics and Diseases of Women, as follows:

Demonstration of specimens by Dr. George Gellhorn, Dr. F. J. Taussig and Dr. A. G. Schlossstein. Dr. Gellhorn demonstrated a uterus accidentally perforated by the sound. Examination of specimens showed a large amount of fat and an almost complete absence of elastic tissue due probably to four pregnancies in quick succession.

Dr. Taussig showed a large abdominal skin-flap removed for relaxed abdominal wall and prolapsed uterus.

Dr. Schlossstein presented a puerperal uterus with adnexa, removed from a patient 30 years old by Dr. Henry Schwarz through Cesarean section. The uterus was cut open in the median line showing the placenta still adherent to the posterior wall and a number of fibroids on and in the anterior and posterior walls. The patient was delivered of a living child weighing 8 pounds.

A symposium on pubiotomy followed. Dr. Percy Swahlen read a paper on "Indications"; Dr. E. W. Saunders presented the "Technic of Operation and Delivery of Child"; Dr. G. D. Royston contributed a paper on the "Complications and Late Results of Pubiotomy," which, in his absence, was read by Dr. R. S. Tilles.

The discussion was opened by Dr. H. J. Storrs after which the following members participated: Drs. George Gellhorn, Schlossstein, Hypes, Shirmer Barker, Jonas and Tilles; Drs. Swahlen and Saunders closed the discussion. There were sixty-six members in attendance at this meeting.

#### MEETING OF OCTOBER 7

The first paper read at this session was by Dr. Rollin H. Barnes with the title "Some Things Proctologic." It was discussed by Drs. A. E. Meisenbach and Ernst Jonas; Dr. Barnes closing.

This was followed by an interesting essay on "Brain Tumor; Report of a Case with Presentation of Specimen," by Dr. A. E. Meisenbach. Drs. Rassieur, Kirchner and Barck discussed the subject and Dr. Meisenbach made the closing remarks.

Dr. Carroll Smith, just home from an extended trip abroad, read a paper on "Bier's Intravenous Local Anesthesia," which aroused much interest and was discussed by Drs. McKay, Rassieur, Bailey and Meisenbach. Dr. Smith closed the discussion.

This session attracted only thirty-nine members. There should have been a larger number present for the program was very instructive.

#### COUNCIL MEETING

The Council of the society held its regular meeting on October 11.

On motion it was ordered that the society should become affiliated with the Civic League organization composed of societies giving attention to improvement of civic affairs.

The following applicants for membership were reported favorably by the membership committee and duly elected: Dr. H. C. Kloepper, Dr. Frances R. Ritchie, Dr. Harold W. Fay, Dr. K. B. Huffman and Dr. Frederick A. Baldwin. Dr. Baldwin was received by transfer from the Dallas County Society of Texas.

The secretary is engaged in having the records of the society from its beginning put into convenient form for reference and the Council voted to allow him fifty dollars for the hire of a stenographer to assist in this work.

## BOOK REVIEWS

**A PRACTICAL MEDICAL DICTIONARY OF WORDS USED IN MEDICINE.** With their derivation and pronunciation, including dental, veterinary, chemical, botanical, electrical, life insurance and other special terms; anatomical tables of the titles in general use, and those sanctioned by the Basle Anatomical Convention; pharmaceutical preparations, official in the U. S. and British Pharmacopœias and contained in the National Formulary; chemical and therapeutic as to mineral springs of America and Europe, and comprehensive lists of synonyms. By Thomas Lathrop Stedman, A.M., M.D. Editor of the "Medical Record," etc. Illustrated. pp. 1000. New York, William Wood & Co. 1911.

In his preface the author says: "It is not the function of the lexicographer to deny the right of citizenship to every word that is not constructed upon strict etymological lines, but he can indicate the correct terms and throw the weight of whatever authority may be afforded him upon the right side. This I have endeavored to do." This sentence contains the scheme of the dictionary. For example, where a barbarous word of general acceptance occurs it is defined, but the correct form is also given.

Synonyms receive special attention and are noted under the word defined and inserted as main titles, with cross reference to the one selected for definition. E. g. Abdomen; belly, alvus, venter. The remedy for the exiguous vocabulary is found in the study of the synonym, and the particular emphasis laid upon it is a noteworthy feature of the dictionary. Attention is called to the lists in small type, inserted from time to time under the English titles, noting the scientific terms for the various conditions associated with the part. E. g. Abdomen: blood effusion; hemoperitoneum, pain; colic, tormina, etc.

The etymology of medical terms has received due attention; the chief word sources of the language are indicated under main titles and, where necessary, under the subtitles also. Eponymic terms are given under the main title as this arrangement shortens the long and more or less confusing lists of subtitles, and allows the insertion of biographical data, etc. In the matter of the double diphthong, æ and œ, the old style has been given simply as an alternative, preference being shown the modern custom of dropping the initial letter. The Basle Anatomical Nomenclature adopted in 1895, which is now being found in text-books and taught in medical schools, is given the preference in the dictionary, as are also the simpler forms of spelling of medical terms. A number of the commoner chemical formulæ are introduced as main titles with their definitions in ordinary language, as an aid to those who may be rusty in their chemistry.

The tables of weights and measures, thermometrical and barometrical scales, chemical elements, and anatomical cuts, together with other similar data are placed in the Appendix as they are properly not definitions at all; thus the etymological feature of the book is preserved intact, and is not invaded by what is really more or less collateral matter.

Dr. Stedman is the able editor of the *Medical Record*, which has occupied a leading place in the medical journalism of the country for nearly half a century; his decision to turn his efforts to lexicography is most fortunate as he possesses eminent qualifications for the rôle, both as regards natural aptitude and training.

CATALOGUE ST. LOUIS MEDICAL LIBRARY  
3525 Pine Street

(Continued from page 180)

- Friedrich, J. B.—*Handbuch der Gerichtlichen Pragis.* Two volumes, G. J. Manz, Regensburg, 1843-44.
- Guy, William A.—*Principles of Forensic Medicine.* First American edition, Harper Bros., New York, 1845.
- Hamilton, Allan McLane.—*A Manual of Medical Jurisprudence.* Bermingham & Co., New York, 1883.
- Hemming, W. D.—*Aids to Forensic Medicine and Toxicology.* G. P. Putnam, New York, 1879.
- Henke, A.—*Lehrbuch der Gerichtlichen Medicin.* Fourth edition. F. Dummler, Berlin, 1824. Ninth edition, 1838.
- Howard Henry.—*A Synopsis of Medical Jurisprudence.* Fifth edition. Charlottesville, Va., 1851.
- Husband, H. A.—*Students' Handbook of Forensic Medicine.* Third edition, E. & S. Livingston, Edinburgh, 1879.
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(To be continued)

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### ORIGINAL ARTICLES

#### A CRISIS IN THE MEDICAL PROFESSION

##### A Consideration of Questions of Ethical and Economic Importance \*

SCOTT P. CHILD, M.D., CHAIRMAN OF  
THE BOARD OF CENSORS  
KANSAS CITY, MO.

Mr. President and Fellow Members of the Jackson County Medical Society: It is with a sense of pleasure, though with a deeper sense of responsibility, that as a member of your Board of Censors, I present for your consideration and discussion certain problems of the greatest ethical and economic importance.

The spirit of dissatisfaction and unrest existing in and permeating the machinery of political, industrial and social organizations to-day is quite as apparent in professional bodies such as our own. To claim or to admit that we, as a scientific and professional organization, are as to our very existence at a crisis, and that neither as a group nor as individuals can we make a positive prognosis as to our future, may be presumptuous, possibly, to devotees of "peace at any price," ruinous; but in any event not untrue or impolitic, as the events in other organizations, local and national, demonstrate.

As with governments so with limited organizations and individuals, their history, progress and degree of success are one of cause and effect, of submission to physical and psychological laws. No flower ever bloomed by chance; nor did a nation ever become established by the toss of a coin; nor an individual attain success without honest efforts long continued.

However, if in the light of history we observe the individual and closely examine the teachings and deeds of the various social groups, be they scientific, political, industrial, or religious, and further investigate the laws and acts of states

and nations, we then see manifest signs of failure to recognize the fundamental principles of, and correct practices for, success, and the purpose and end of social effort, i. e., *service*.

Commercial success and financial gain are to-day, and so evidently have always been, the aim in the various human activities, that such would appear to be the end in view of organized society.

These statements are not those of a pessimist, nor of one who is himself free from the commercial spirit, but of one who recognizes certain unfortunate conditions and tendencies which are adverse to real progress, and inconsistent with the professions of the individual and of the organization of which he is a part.

England, on instituting commercial relations with China, ignominiously immortalized itself by introducing, among the already sleeping millions of the East, the deadly opium habit. The United States government in cooperating with the laudable motives of foreign missionaries in spreading the teachings of the Christian religion and Anglo-Saxon civilization, ballasted their vessels with rum and other spirits, thus largely counteracting the practical efforts of the missionary movement.

The accusation is general and proof is plenty that United States senators as well as many other officers in the national government use their positions for personal and corporate gain. In banking and general business institutions, speculation and graft have had an iron hold, but are fast getting their reward behind bars and on rock piles. Recent publicity shows that avarice and disregard of personal honor are not unknown in the legal profession. A prominent lawyer of this city in a recent issue of a daily paper, takes occasion to score the snitches of his profession, as resorting to thoroughly unethical methods, and to confess sadly that many of them represent leading law firms. His classification of them is graphic and explanatory—he terms them "crooks and vultures" and urges their riddance.

And now on turning the searchlight of inquiry or even casual observation on our own profession,

\* Read before the Jackson County Medical Society, Kansas City, Mo., Oct. 17, 1911.



we find many of its members open to severe criticism as to methods, practices and apparent aim. And most unfortunately, and to be regretted, is the fact that this statement applies to members in regular standing in this our County Medical Society.

The purpose of government, of the various professional organizations, and of individual effort, is thus lost sight of. It becomes in result a game of chance, in which the cards are stacked, a business deal in which dividends in dense, yellow gold is the end sought, and if need be fought for.

In view of the foregoing and of other conditions both medical and social with which we as a profession have to do, I had issued in the weekly *Bulletin* of last June, a communication to the members of this Society, requesting a statement of their individual attitude on the customs of the "division of fees," "advertising," "consultation with irregulars" and "contract work." It is recognized that such practices are only a few of the many offenses against our "principles of ethics," but of necessity the time limit, during one evening, renders it impossible to treat the general subject. Several responses were received to these questions, and they were direct and unequivocal in their acknowledgment of the existence of the conditions and the views thereon of the writers.

I speak advisedly in making the statement that these questions, brought up for our consideration to-night, are of the highest ethical importance, but further are, in fact, social and economic in their bearing and have to do with our very existence, as well as the welfare and life of all society.

National, state and district medical associations, the country over, are discussing and taking action on local and general practices common in our profession, but lowering to its ideals and claims; and now the periodical and daily press are beginning to publish articles severely criticizing our methods, and boldly calling the medical wolf to cast his false cloak.

The profession of medicine has a history in the progress of civilization, in the discovery of the cause and in the prevention and cure of disease, in contributions to science, and in the improvement of local and general sanitary conditions, that should make any man proud to be a member of it, and to be willing and anxious to arise and defend its fair name when one or a group do attempt to besmirch it.

The Oath of Hippocrates and our Principles of Ethics need no qualifying or amplifying. Each man having conferred on him the degree of doctor of medicine, by a chartered and legally qualified medical school, knows his duties to his colleagues, and his responsibilities and obligations to his clientele—the public. On his accepting the degree of doctor of medicine and subscribing to our Principles of Ethics, he proclaims a capacity to practice the science and art of medi-

cine, and professes a character to deal honorably with the unfortunate victims of disease or accident who may turn to him for his superior knowledge and skill. He stands for ability, humanity and conscientiousness in the public mind.

#### DIVISION OF FEE

But as we assume the investigation of conditions now existing among, and methods being resorted to by, members of our profession, what do we find? There is not a difference of opinion, that commercialism, with its parasites, speculation and graft, has a strong hold in our midst, and that by certain practices, resorted to openly or in secret, the high purposes of the profession are thwarted, the individual and public welfare is disregarded, and the true development of medical science is checked; and, may I add, the regular profession is being humbled.

It is recognized that due to the relatively large number of men in the profession, to specialization with its great appeal but many pitfalls, to the changing attitude of the public to medical practice, and to changing economic conditions and other difficulties attendant on securing and maintaining a satisfactory or even living income, many physicians, surgeons and specialists have resorted to private understandings, secret commissions or business considerations, which result in the patient being made a commodity; the principal consideration being one of the fee involved and the amount to be held by or returned to the physician referring the case.

That such fee splitting is a fact is common history the country over, most flagrantly practiced in our neighboring states, and, to our regret, the custom prevails among the profession in this city. To the uninformed, to the doubters or to those who may believe that either proof is wanting, or who as guilty may demand evidence to prove their guilt, permit the essayist to say, that plenty of proof is in hand and more within easy access if our society acts on this as it should. To be specific, only during the past month, a physician, a graduate of one of our local medical schools, stated that he had referred operative cases from his town, about 100 miles from Kansas City, to a surgeon and former teacher of his, and that subsequent to operation a check was mailed to him by the surgeon.

Some weeks ago, on request of the chairman of your Board of Censors, a member of this society submitted to an interview, in which he confessed that he had mailed several letters to members of the profession in general practice in which he stated that he was now practicing surgery and was prepared to attend to any work they might refer to him, and concluded by saying, "the business consideration would be satisfactory." A local physician, only recently, in talking to a colleague, committed himself in speaking of the number of surgical cases he was referring to a surgeon in

this city, of the fees charged, and the fact that he, the physician, received one-half of the money paid by the patients.

A member of this society on graduating a few years ago, and having eye cases to refer to an ophthalmologist, went to a local man of practice and ability and solicited a fee on cases he might refer for special eye treatment. The oculist very honorably refused to buy cases or to pay percentages; and the physician has not referred any cases to him since. Within the past two weeks this same physician refers a special case of another type to a certain specialist in this city, and again demands a division of the fee.

A very busy surgeon of this society goes into a country town to perform an operation on a boy, for appendicitis. This boy is the only child of a family of moderate circumstances. The family physician in the case mails a check for \$500 to the surgeon through a local bank. The surgeon immediately remits a draft for \$200 directly to the family physician. Many other cases and other phases of this practice could be presented, and they each and all offend "the principles of ethics governing the division of fees," which reads:

The principles of medical ethics of the A. M. A. shall govern this society as its code.

#### ARTICLE VI.—COMPENSATION

##### SECTION 4.—Principles of ethics, A. M. A.

"It is derogatory to professional character for physicians to pay or offer to pay commissions to any persons whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or to receive such commissions."

To be perfectly frank, on a careful analysis of the results associated with and following on the secret practice of a division of fees, between physicians and surgeon or specialist, we find that the public is being exploited, human life is at times sacrificed by the young or inexperienced surgeon, who will take any case referred to him; unnecessary operations are not infrequently performed from incorrect diagnoses; and, under biased judgment, influenced by fee, needless surgery is resorted to. Further, where two or more medical men are in the case there is the tendency to charge an excessive fee against the unfortunate patient, who needs and deserves the most accurate diagnosis, the greatest skill, and a fee commensurate with his ability to pay, and alone for the particular services rendered.

With such conditions and practices existing to-day in our ranks, irrespective of the same in other professions or lines of business, it is not difficult to trace the causes leading up to and producing them.

In the first place, allow me to speak of a contributory cause, and usually presented in extenua-

tion of the secret division of fees, namely the failure of the patient to acknowledge and to pay willingly for the preliminary medical and conjoined services in a surgical case. Hence to requite him and to avoid embarrassment the surgeon assumes the whole responsibility, charges a good fee, and remits a portion, or a percentage of this, to the physician. Here is where the evil is done, in that the patient being ignorant is deceived and can be imposed on; the physician is entering on a practice of dishonesty and cowardice—and usually receives more than his services are worth. The fact is that there is but one practice to follow and that for the physician to charge directly for all of his services according to their value. He acknowledges by calling in a surgeon that "he cannot deliver the goods," in surgery, or as the case may be in some specialty. There his financial interest should cease, excepting as he comes into the case again. And again if he renders services he should charge for them. Uniform form and united action on this would go largely toward a settlement of this problem.

Among specific causes of this evil are the character and intellectual fitness of the men in the profession, with the degree of competition in any particular community, city or state. Again, we have to admit that within our ranks here are those who relate their patients to a fee, to a dividend, and strive even at times to corner cases as would a Chicago grain speculator; and the physicians in the adjoining states are their agents pure and simple.

Further, it has to be acknowledged that due to lax state laws on the qualification of those applying for licensure; to insufficiently endowed and proprietary medical schools; to sympathy and sentiment for the poor and ambitious but unprepared applicant for medicine; and further an indifferent public opinion, have severally permitted the entrance into our ranks of two classes who are largely the ones practicing the aforesaid methods, namely, the untrained and the unprincipled.

It cannot be gainsaid that when it comes to the question of the division of fees, and other unethical practices among medical men, one or the other of these groups is represented. And in result one is just as responsible and reprehensible as the other. Fortunately the organized profession now realizes this and is making it an issue in national, state and county societies. Likewise such organizations as the "Carnegie Foundation," the Association of American Medical Colleges, and an awakening public opinion, are bringing strong and progressive influences to bear on the medical surplus. As a result the future will see fewer unqualified graduates entering the field of medicine.

The man unqualified by culture, by proper preliminary, scientific and practical training, whose contact with men and affairs previous to taking up the study of medicine, has been insufficient, is truly to be pitied if the established profession



and the public do not give him their confidence. But such is his misfortune, not their blame. Such men should early learn their real capacity to earn an honest living from their chosen profession. If such cannot be obtained without resorting to questionable methods, then should they sacrifice ambition and pride, and return to the field of their nurture and respective abilities. Society should not have to bear their inefficiencies or questionable practices.

On the other hand, the unscrupulous and unethical practitioner, no matter how well qualified, is a menace to society, to the organization of which he may be a member, and especially to the younger, struggling physicians striving to get established. He deserves only one treatment, the collection of facts against him, his early trial by the district or county society, the voluntary and immediate correction of his unethical methods, or his expulsion from the society.

Being confronted with this problem and possessing a set of by-laws and a principles of ethics bearing directly on it, it behooves us as a society to accept and seriously assume the problem, though without malevolence, and to initiate immediate action toward its solution.

#### ADVERTISING

Turning from this subject which has primarily to do with a question of personal honesty and fair dealing with the public, I wish to ask you now to consider the question of "advertising" by our profession. To me the time for such a discussion was never more opportune. We are living in an age of publicity. The commercial world is wild over "ads." The press, periodical and daily, are one-fourth to three-fourths advertising matter. The business interests are crying their wares from the house tops by day, and through the aid of electricity, by night, flash their names and products across the sky. Thousands of dollars are spent to effectively introduce a suggestion to the public mind, and to eliminate for the time being sound judgment. A piece of gum; a new brand of cigar; a perfumed soap; an erotic and exotic mystic cult; a sure cure medical specialist. Of these the press are full. A credulous public reply and pay the price. And not only the business world but the profession has learned of a quicker and an easier way to secure an income than by waiting to be consulted through honest effort, acquired skill, scientific knowledge and merit.

It is with deep regret that acknowledgement must be made that never, in the history of Jackson County Medical Society, was more publicity given its members through the public and medical press and institutional literature than at present. Recognizing that certain forms of advertising of specialists and sanatoria, in our regular medical journals is, at least, accepted as ethical and therefore permissible, there is no reason why we as a society should longer countenance and

support methods of advertising, carried in journals by members of our society, calling attention to special and preferred methods of treatment, to advertising as specialists when in general practice, or to carrying two or more page advertisements in the same issue—a method simply of suggestion. Nor should we longer permit the names of our members to be printed on the consulting staff of an institution which, in its literature, professes to keep the secret of its unfortunate inmates, and adding also that its consulting staff will do likewise; this institution and its methods having at no time been endorsed by this society.

The power of the daily press is acknowledged as being very great, and its utility is beyond that of almost any other public institution. But such acknowledgement does not imply its justifiable use by all classes for all purposes. However, its common use, its wide circulation and the speed with which it reaches its destination offers a great temptation to any one desiring publicity, even for a restricted and legitimate clientele.

To illustrate this temptation and a common attitude of mind the following is cited: A prominent citizen and capitalist, whose interests caused his temporary withdrawal from his active practice and specialty, considered the question of announcing the resumption of his specialty, to his clientele and friends, through the press. It happened that before doing so he consulted the chairman of your board of censors. Following the interview it was acknowledged that such a means of notifying his patients, and at the same time the general public, would be establishing a dangerous precedent, which the younger members of the profession would comment on, and naturally feel justified in taking advantage of.

On July 26 of this year I was interviewed by a representative of the *Kansas City Post*, who then solicited my professional card (at \$2 an insertion) for advertising space in their journal for four consecutive Sundays, the understanding that it was to appear as part of a full page advertisement with business concerns and other professional men contemplating taking offices in a newly constructed office building. The representative of the *Post* told me he had been to other members of our society who favored the idea, and then asked me, as a member of your board of censors, if I saw anything irregular or unethical in the proposition. My reply was that both as a member of the board and as a practicing physician, I could not commend it, for both in its purpose and in the inevitable results it was identical with the full page advertisements of the acknowledged advertising quacks of Kansas City.

The proposition has been carried through. As a result a half million readers of the Sunday editions, of two of our dailies, have had their special attention called to a certain group of physicians, most of them members of this society. These cards call attention to their specialties, telephone

numbers and the location in this new and magnificent building.

Was this in accordance with our "Principles of Ethics," and the professedly dignified methods of our profession?

Chapter II, Article 1, Section 7 of our principles reads:

"ADVERTISING METHODS TO BE AVOIDED

Section 7.—It is incompatible with honorable standing in the profession to resort to public advertisement or private cards inviting the attention of persons affected with particular diseases; to promise radical cures; to publish cases or operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to employ any of the other methods of charlatans."

The query arises why this striking precedent? In the issue of the *Kansas City Journal*, June 22, 1911, is found the following editorial:

"COMING UP TO DATE"

"Codes of professional ethics are matters or institutions with which the general public has no particular concern except as it may be adversely or beneficially affected thereby. But the reported decision of the Missouri Dental Association to permit its members to advertise without losing professional caste will undoubtedly strike most people as eminently sensible and up to date. The general public, it may be ventured, has no special sympathy with the idea that the man who advertises his services is on a lower plane than the man who does not. On the contrary, the people generally have been educated to the point of looking on advertising as evidence of worthy enterprise and they do not stop to differentiate very rigidly between the one who announces his wares for sale and the one who advertises that he is ready for patients or clients.

"This is eminently the advertising age, the era of printer's ink. Even states are getting press agents. Publicity has been robbed of any taint of quackery by its very universality, and now the question is solely whether the advertiser is honest; whether his goods are as he represents them or whether he is competent to perform the services he offers. The laws have been growing more and more vigorous for the incompetent in all the learned professions until it is now little short of presumption for the members of any one profession to arrogate superiority to themselves because they do not utilize opportunities which others employ to get their offerings before the people on whom they depend for a livelihood.

"Admitting that it is really not the public's business whether the members of this or that profession advertise or not, it is nevertheless

gratifying, even if it is intruding to express the gratification, when anybody gets into harmony with the spirit of the times, and if there are any quacks in any of the learned professions who are reaping the material rewards of advertising it would seem that the best way for the elect to get what belongs to them is by taking a leaf from their rivals' books and a liberal space in the various mediums of publicity."

This editorial contains the attitude of the press in general, of part of the commercial world, and of the acknowledged advertising specialist. But further, individual members of this Society have expressed a desire and willingness to do likewise; believing that they have the right, and that if newspaper advertising were acknowledged as ethical, it would solve the "quackery" problem. In the opinion of the essayist such means of making one's self known is not only contrary to the spirit and letter of our principles of ethics, governing every member of this Society, but is subversive of scientific medicine and professional dignity and progress. And by such means we are fast losing the respect of the progressive and cultured public.

Furthermore, what it is leading to is illustrated in the frequent interviews of one of our members doing a special line of diagnostic and therapeutic work, in which he not only has an undue amount of copy devoted to himself, but brings to the public attention claims of a specialty, which, while of great and increasing value, is in an experimental stage, and contributory to general diagnosis and treatment, rather than confirmatory and curative.

But to show the general character of the present day advertising of the medical profession is to note the name of a prominent surgeon of this city whose professional and social standing are beyond question. Within a very few days of each other three distinct notices were given him, in a local daily paper, in connection with operations on three individuals prominent either in public or social life.

Another instance of "press work" has but recently been presented to us in which a daily journal publishes a reputed interview with a member of this Society on the changing of his office, during which interview the number of years' tenancy in one office is mentioned, the number of thousands of office patients treated, and the daily attendance. And this is read by the public right along with the column article on the Temple of Health. The public is not discriminating. That these are breeches of professional ethics and dignity cannot be gainsaid. In his annual report, at the A. M. A., at Los Angeles, in June last, Dr. H. L. Harris, chairman of the Board of Trustees, speaks to this point, in saying that the "House of Delegates can pass resolutions denunciatory of such practices as the division of fees, or the use of the public press for all self-laudatory purposes, which not only derogate the



honor and dignity of the individual but degrade the profession."

Gentlemen, such practices are homicidal to the individual, and will inevitably, if permitted to continue uncondemned, bring on the disorganization of the regular local profession. It is needless to say that summary and immediate action should be taken by this body in reference to such practices. Our by-laws and principles cover them specifically. We should at least discuss the subject, and as a society declare ourselves either in favor of such newspaper notoriety or as unalterably opposed to it.

A prominent representative of one of our dailies in an interview said: "If the individual members of the medical profession are sincere in not wishing their names to appear in our paper in connection with operations and cases their wish will be regarded." And then he cited the case of a prominent surgeon who on one day made personal protest against the custom and within three days submitted voluntarily to an interview for publication.

#### CONSULTATIONS WITH IRREGULARS

It had been the writer's intention to present along with the subjects already discussed, two other offenses against our principles of ethics, namely, that of the so-called "contract practice" and "professional relations or consultation between our members and advertising specialists." The subject "contract practice" is, however, to be presented by another member of this society, later in the year, and it well deserves special consideration. I now request your indulgence in the consideration of a practice which is of such a nature and so far-reaching that its handling, to say nothing of its correction, is an extremely difficult problem.

The inconsistency of it is the first thing to impress one. We have, as stated, specific by-laws and principles against advertising any special treatment, cures or reports of cases, and even against the insertion of professional cards in the press. Moreover, on this very point during the present year we have declared ourselves by dismissing members of our Society for such acts, and denied admission to applicants practicing such methods. And, notwithstanding this, our own members are now in many instances consulting with, and receiving cases from, advertising specialists and other irregulars.

It is claimed by some that as a part of the great social readjustment now going on, to the present industrial revolution, to scientific advancement and to a claimed newer psychology we have the causes for the relations being established between the medical advertiser, the irregular, the Christian Science healer and the organized profession. They say it is an evolution. Locally many of the laity, including the wealthy, those high in society, prominent business men, leaders

in the legal profession and educators consult and join the groups mentioned, submit to their treatment and issue them printed testimonials, and pay for the services rendered. But on many an occasion consultation is suggested or demanded. Inevitably they turn to the members of the regular profession — and the doctor or healer without the fold can always find some so-called regular, and a member of this organization, who will open his door.

The fact of it is that Kansas City, like Point Loma, has established many incongruous relationships, such as the boon companionship of the wizard of the Temple of Health and the pastor of a prominent evangelical church. And now it is proposed by a millionaire of this city to build a great church hospital, the plans being executed for the largest, and in all probability, the most modern infirmary in western Missouri. According to the press, one of its contributors and proposed directors, is the head of the largest medical institute in Kansas City. At the time this hospital movement was projected several members of our society attended a meeting for the purpose of raising money, and it is said some of them have been named on the hospital staff.

The essayist wishes to make no reference to the purpose of those interested in this said hospital, nor as to the character and ability of the physicians of the particular institute in question, but the past action of our Society and our professed and subscribed attitude toward the methods of securing business, as practiced by such institutions surely render incompatible and unethical the assuming of any relationship between our members and such proposed hospital, if said management is as intimated by the press.

From a local daily within the past two weeks we learn of a member of our Society holding a consultation with the head of a local advertising sanitarium. It is common talk that certain members of this organization, and accounted leading physicians of this community, are quite commonly called into consultation by the acknowledged irregulars. But this is more than common talk, many specific cases are known. The result is that the purpose of our organization is made a farce, the subscription to our principles of ethics is a lie, charlatanism thrives, and the guilty have their pockets lined with filthy lucre.

A present Christian Science healer of this city, a graduate physician, and formerly a member of this Society, in turn a druggist and a farmer, gains influence in his church. He is called into many homes for some unaccountable reason — for are we not taught "there is no pain; there is no disease?" But his visits result in chambered consultations with surgeons of local ability and Jackson County membership. Demonstrations not availing, operations are performed — resulting sometimes in what we call death; sometimes in escape — but always a fee.

Without discussing this custom and its results, the query does arise — why? Is it in accordance with the spirit of our principles of ethics, the upholding of our profession? But above all is such relationship conducive to public welfare? Is society rendered a service?

#### CONCLUSION

Such, gentlemen and members of the Jackson County Medical Society, are some of the signs and symptoms leading me and your Board of Censors, concurring, to assert that we, as an organization, are at a crisis.

The means for directing this crisis so that a favorable prognosis may be given, is not to be named at once, nor to be secured for the asking. But do not all of us remember the sleepless nights we have spent with a desperately ill babe, with a parturient mother, long delayed in a difficult and almost fatal labor? Have we not sacrificed many a meal; given up many a needed and well-earned vacation? Have we forgotten the test of duty as portrayed in the Bonnie Briar Bush, where the noble, heroic Dr. McClure, in order to save a dying woman, braved the swollen mountain stream and forced on the metropolitan surgeon, in his temerity, the performance of a humane act, even though he endangered his own life? Have we not an example in the life of the late Dr. Blencowe E. Fryer, a leader in scientific medicine, ethically the peer of his profession, against whom no ill word was ever spoken, no evil practices known, whose name practically never appeared in print, but remains for service rendered, indelibly imprinted on the minds of many a patient and many a struggling physician? Did we ever know of his buying a case or soliciting a fee for a patient referred to a colleague? His life was an open, clean page in the annals of medicine in Kansas City. Its study will give many of us an idea for the solution of our problem. In the end it is personal.

Many of the specific instances cited in this paper have been presented to your Board of Censors. Where charges have been preferred with evidences furnished; or on investigation we have been enabled to act, we have done so. But many of the personal charges or assertions have not been formally presented or proof furnished. Here is where we make *an appeal*, and suggest the principal means toward the correction of these evils mentioned, and any other offense, against our by-laws and principles of ethics: namely, that the *membership arise to its duty, live up to its oath, and on having any evidence against a member voluntarily breaking a principle of ethics, prefer charges at once, in writing, against the guilty, and furnish the evidence.* We, your Board of Censors, having accepted our appointment to office only from desire to fulfil the same, are anxious to assist, to our utmost, in the correction of those practices which we know are injuring

our reputation as a society; are limiting the organized profession in its performance of those functions to city, county and state, which have to do with great sanitary problems; which further and above all limit us in maintaining our former personal relations with the sick individuals who have, in all past ages, given the regular physician their confidence, invited him into their homes and entrusted him with their honor and their lives. Yes, and even now he who has an open eye and interest in the realities of society can see many of the laity, who have wandered, now struggling blindly through the mystic camps of the many schools of suggestive therapeutics, mental healing and charlatanism, seeking the true and former ideal type physician, who with earnest, clear mind and honest heart, is the same in this century as fifty or 100 years ago.

In other and a few words we, the Board of Censors, urge you to put us to the test. You members of the Jackson County Medical Society, who know the flagrant offenders in buying business and stealing the widow's mite, who observe the many offenses against our acknowledged stand in opposition to publicity and advertising, who have knowledge of the unethical and undignified consultation of members with advertisers and quacks, present written charges and evidence direct to your Board of Censors or hand the same to our president. Such we portend will assist in the correction of certain evil practices in our profession and raise its dignity and reputation.

1004 Rialto Building.

#### THE USE OF DIETS RICH IN CARBOHYDRATES IN THE TREATMENT OF DIABETES MELLITUS \*

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For many years it has been noticed that diabetics who were on carbohydrate-free diet were prone to develop grave nutritional disturbances and coma. It was later noticed that relief often followed when carbohydrates were resumed. Thus we learned that reducing the quantity of sugar excreted, by limiting the quantity taken into the body, was frequently productive of more harm than good. The question then presented itself: How are we to limit the excretion of sugar and at the same time give sufficient carbohydrate food to prevent the balance of metabolism from being too much disturbed?

In 1899 Winternitz and Strasser<sup>1</sup> reported certain results obtained in cases that received a milk diet. These results were apparently much better than those obtained with the ordinary methods of treatment, but were by no means ideal.

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

1. Winternitz and Strasser: *Centralbl. f. Inner. Med.*, 1899, No. 45.



Following these observations many so-called cures were exploited which had for their basis the free use of various carbohydrates. Many of these were worse than useless, but some were destined to become widely used. Of these Mosse's potato cure<sup>2</sup> and Von Noorden's oat cure<sup>3</sup> are perhaps the best known. In the hands of most observers Von Noorden's diet has been productive of the best results. This diet consists of 250 grams of oatmeal or rolled oats boiled for two hours with sufficient water to make a thick porridge. To this porridge is added the whites of six eggs, or an equal quantity of vegetable albumin, and 250 grams of butter. The whole is thoroughly mixed and cooked again for three minutes. This constitutes the adult ration for a day and, according to Von Noorden, may be divided into portions and served at two-hour intervals as a soup or thick porridge with a little black coffee or sour wine.

This diet is to be continued for at least two weeks. At the end of that time meats and vegetables, not containing starch, are to be added. Finally other starches are given if tolerance can be acquired. Von Noorden's claims for this diet are, that in severe cases there is often a marked decrease in the amount of sugar and acetone bodies excreted and that there is an increase in strength, often accompanied by an increase in weight. He states that in mild cases this diet often does not act so favorably and occasionally he thinks may even do harm. His theory is that diabetic patients can assimilate a single starch better than a mixture of starches, and that the single starch best tolerated by the average diabetic is oat starch thoroughly cooked.

My experience with oat starch has extended over a period of eight years during which time I have treated twenty cases of diabetic mellitus of various types. The first cases were treated according to Von Noorden's methods but later experience has suggested various modifications.

My first difficulty arose from the complaints of my patients. Most of them found it difficult to continue the diet over a sufficient period on account of its extreme monotony. This caused loss of appetite making it almost impossible for them to consume the required quantities in twenty-four hours. To meet this objection my first departure was to follow the suggestion of Herrick,<sup>4</sup> who advocates cutting the cold porridge into slices and browning it on a hot griddle much as fried mush is prepared. This proved so satisfactory that I attempted further modifications, especially with the idea of furnishing some substitute for bread.

After various formulæ had been tried, with the help of Mrs. Sowers, at that time dietitian to the Rebekah Hospital, I devised the following recipe: 325 grams of rolled oats (about one quart) is

boiled for one hour, sufficient water being added to make a rather thick porridge; to this is added 60 grams of lard or cottolene (about two large tablespoonfuls), 10 grams of baking-powder (about two teaspoonfuls) previously mixed with two tablespoonfuls of dry rolled oats, and 5 grams (about one teaspoonful) of salt. The whole is thoroughly mixed or kneaded for ten minutes, rolled on a mixing board to a thickness not exceeding one-half inch and baked in a moderately hot oven for an hour.

This makes a very palatable substitute for bread and may be eaten hot or cold. The recipe represents, approximately: Starch 900 calories, fat 400 calories.

I then adopted the following general plan of feeding: The patient is placed on carbohydrate-free diet for from one to four days to determine the type and severity of the disease. If sugar disappears from the urine in twenty-four hours, strict diet may be discontinued and under no circumstance do I continue it for longer than four days if sugar does not disappear. In severe cases where it is deemed inadvisable to wait the oatmeal diet may be started at once. Determination of the sugar and acetone should be made every twenty-four hours from the whole amount of urine passed.

The following diet may then be instituted with such variations as age, sex, normal appetite, etc., may suggest. Water may be allowed the patient at any time. The meals are based on the following sample menu:

	Representing in Calories Approximately		
	Proteid	Carbo- hydrate	Fat
<b>Breakfast</b>			
1/8 Von Noorden's formula, as oat porridge	50	100	260
2 poached eggs	150	...	...
1/6 formula of oat bread	...	170	65
1/2 oz. butter	...	...	125
Black coffee, 1/2 gr. saccharin	...	...	...
<b>Lunch</b>			
Steak or chop, 4 oz.	150	...	100
1/4 formula oat bread	...	250	100
1/2 oz. butter	...	...	125
Celery or lettuce salad with 1/2 oz. olive oil in dressing	...	...	125
Tea	...	...	...
<b>Dinner</b>			
1/8 Von Noorden's formula, as oat-meal, soup	50	100	260
Roast beef, pork or fowl, 6 oz.	225	...	200
1/6 formula of oat bread	...	170	65
1/2 oz. butter	...	...	125
1/8 Von Noorden's formula, as fried mush	50	100	260
Tea, coffee or claret	...	...	...
<b>Total</b>	<b>575</b>	<b>890</b>	<b>1,810</b>

This diet contains approximately 3,275 calories per day which is amply sufficient for the average individual and allows for a considerable waste.

Such a diet avoids the monotony of the strict oatmeal diet and in my experience gives as good results.

If the patient shows no increase of sugar or acetone bodies after three or four weeks of such feeding, modifications to test tolerance for other starches may be instituted. For instance, for a

2. Mosse: *Rev. de Méd.*, 1902, No. 12.

3. Von Noorden: *Berl. klin. Wchnschr.*, 1903, No. 36.

4. Herrick: *Jour. Am. Med. Assn.*, 1908, 1, No. 11.

day, always beginning in the morning, seven fairly large baked potatoes may be substituted for all oat foods, leaving the rest of the menu unchanged, except, perhaps, to increase the quantity of butter and add two eggs to supplant the fat and proteids withdrawn with the porridge. If after a potato day sugar does not appear, a day of rice may be given. The rice, like the oatmeal, must be thoroughly cooked and should not exceed 250 grams.

It is well, as a rule, to allow several oatmeal days to intervene before a new starch is tried. Wheat starch is left until the last.

Patients should be kept on single starch diets for some time before mixed diets are begun. These I usually inaugurate by adding a pint of cream to the oatmeal diet, gradually increasing the number and quantity of starches as tolerance is shown.

Of the twenty cases treated eight were in elderly individuals and may be considered of the moderately severe type. All were improved but none developed much tolerance for other starches. One patient has practically lived on oat starch for five years and is very comfortable. The addition of one slice of wheat bread, however, immediately raises the quantity of sugar in the urine. Five cases of varying types acquired considerable tolerance; three, almost complete tolerance, and four cases were not improved; one of these seemed to have been made worse, but left my care before a conclusion could be reached.

In conclusion it seems to be definitely proven that patients suffering from diabetes mellitus must be given some carbohydrate food. In giving starches a single starch is better tolerated than mixed starches. Oat starch is better tolerated than any other starch. By the use, for a time, of a diet in which oat starch is the only carbohydrate given, tolerance for other starches can sometimes be established.

My experience supports that of Herrick who states that mild cases are often greatly benefited.

Humboldt Building.

#### ETIOLOGY OF RETRODEVIAION OF THE UTERUS\*

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In dealing with the etiology of retrodeviations of the uterus, it becomes apparent at once that we must divide the subject into two classes. First, that which deals with direct, gross, pathologic lesions and apparent congenital defects; second, that class of simple retroversion without visible pathologic alterations.

It is my intention to deal with the etiology of those cases coming under the second class,

although giving a brief review of the recognized factors in the first class.

Anatomists and gynecologists are agreed that the uterus normally lies anteverted between the bladder and rectum. In children and early puberty it is likewise anteverted. Why this position should be is, of course, a conjecture. The uterus is very movable, allowed by its ligamentous attachments. Much stress is placed on its position as being due to the filling or emptying of the bladder and bowel. If such was of much importance, then changes in the uterine position would be more frequently noticed.

It will not be amiss to give a brief review of the embryological development of the uterus before discussing the etiologic factors of retrodeviations.

The genital cord contains four ducts, the two latterly placed Wolffian ducts, and the two Mullerian ducts, which lie nearer the median line and more dorsally. The genital cord is the anlage of both the uterus and vagina.

The Mullerian ducts unite within the genital cord which enlarges greatly and is differentiated into the uterus and vagina; the upper or cephalic portions remain separate and form the Fallopian tubes. The caudate portion develops into the vagina.

W. Nagel has pointed out that the genital cord becomes bent very early in the human embryo, so as to divide the cord into an upper or uterine limb which inclines ventralward over the bladder; and a lower or vaginal limb which runs longitudinally between the bladder and rectum.

The genital cord grows lengthwise with a gradual increase in thickness. The longitudinal growth seems to be most marked in the distal portion, developing downwards and forwards, and inasmuch as the expanse of the urogenital sinus does not keep step with the other growth, the sinus becomes gradually flattened by which the distal junction of the genital duct (later known as the orificium vaginae vestibulare) at last obtains its position. During this whole period of development the distal portion is stretched, and from its oblique direction it is a necessary sequence that it make an obtuse angle with the proximal portion (later the uterus). The deepest portion of the bend in the genital cord is noticeable where later the external os develops.

Nagel also states that the union between the bladder and the genital cord reaches especially high in young embryos. It is only later, after the formation of the vagina, that we notice a change, in which the free portion of the uterus closes more in a longitudinal direction whereby the relation of the bladder and cervix as it is found in the adult gradually takes place. The attachment of the bladder and cervix have no bearing on the forward position of the uterus; on the contrary, it is an obstacle to the backward

\* Read in General Session, Missouri State Medical Association, Kansas City, May 16, 1911.



swing of the cervix and anterior position of the corpus uteri, up to a certain degree.

To a certain extent perhaps, the high connection of the bladder to the genital cord may have some bearing upon its anteversion, but only in a minor degree inasmuch as the bend in the genital cord takes place long before any extensive connection exists with the bladder.

In all examined fetuses the uterus is recognized in anteversion. Von Ackeren found in a 9 c.m. long embryo such a marked anteflexion of the upper portion of the genital cord that the upper parts of the anterior wall became fused together, and at one portion ulcerated so that communication was established between the greatly anteflexed fundus and the lumen of the cervix; in other words, a complete circular tube. Holliker, also Tschaussow, described retroversion and retroflexion in small embryos.

From the foregoing, we must conclude that anteversion is the natural sequence of the development of the genital cord.

We have a possible etiologic factor therefore, congenital malformation or failure of the genital cord to become bent ventralward during the early fusion of the Mullerian ducts. Von Ackeren reports finding the angle of the bend reversed in the genital cord.

A frequently mentioned cause of retrodeviations is overdistention of the bladder. That the uterus is comparatively a freely movable organ is evident, and we know that to a certain extent its position is influenced by the filling or emptying of the bladder, but I do not believe that the uterus is forced into retroversion by a distended bladder as readily as is theoretically taught. There is a tendency to a slight elevation of the uterus with distention of the bladder, as it rises, due possibly to the uterovesical ligaments. The base of the bladder is rather firmly attached and does not enter much in the excursion of a distended bladder. It is the upper surface that becomes elevated, and as it rises the uterovesical fold makes some traction on the anterior uterine surface.

I have conducted a limited number of experiments endeavoring thereby to ascertain the degree of deviation of the uterus backwards and forwards with the bladder forcibly filled and with it emptied. I have not been able to observe any marked change in either direction. The method employed was as follows: a long uterine stem pessary to which a long delicate wire arm was attached to the phlange, was introduced into the uterine cavity. The vaginal walls were held apart with a speculum so as not to allow the wire to come in contact with them. The wire protruded about two inches beyond the introitus. I carefully noted the position of the tip of the arm (which forms quite a long lever) while the bladder was emptied per catheter, then it was forcibly distended with solution; but the deviation of the wire arm was only of slight degree.

If any decided retroversion had taken place by filling the bladder we would have expected the lever to have indicated the same in an exaggerated degree. The experiments were done with the woman in the upright posture.

Dr. Robert Ziegenspeck's experiments conducted on the cadaver in the recumbent position in this same line do not tally with mine. From my findings I am inclined to disregard the often mentioned distended bladder as one of the etiologic factors *per se* of retroversio uteri.

In passing, I shall give a list of the more common etiologic factors of the first class:

Subinvolution of the uterus (including erect posture too soon after labor, and the constant dorsal position during the puerperium), either of the corpus or the cervix, or of both, following labor or miscarriage.

Injury of the upper portion of the vaginal wall causing scars which contract and cause forward drawing of the cervix.

Lacerations of the pelvic floor with concomitant subinvolution of the supporting ligaments, e.g., uterosacral and broad ligaments.

Fibroid tumors either in the anterior or posterior wall of the uterus, intramural abscess, malignant tumors, echinococcus disease, endometritis, simple, gonorrheal, syphilitic, or tuberculous, or any form which has a tendency to increase the weight of the uterus so that it drags down on its support; parametritis, perimetritis, and senile atrophy.

Of the cervix we have tumors, inflammatory hypertrophy, including lacerations and hypertrophy of non-inflammatory origin.

Adnexal involvement includes pyosalpinx (gonorrheal, puerperal and tuberculous), hydrosalpinx, chronic salpingitis where tubes are thickened, perisalpingitis causing adhesions which on contraction drag the uterus backwards, tubal pregnancy and hematoma. Cystoma of ovary, perioöphoritis causing adhesions, chronic oöphoritis with prolapse of ovary, different ovarian tumors and ovarian pregnancy; tumors of the broad ligaments, adhesions at Douglas' cul-de-sac, tumors arising in the pelvis or that extend into the pelvis.

The apparent congenital causes are, short vagina which pulls the cervix forward; a long cervix; imperfect descent of the ovary causing the upper posterior part of the broad ligament to draw backward.

Trauma, such as falls without a pre-existing pathological condition of the uterus is, I believe, practically no factor. Cases are reported where within a few hours before a fall a vaginal examination showed an anteverted uterus and on examination after the fall it was found retroverted. Such cases lead us to surmise that some pathology must have existed or else an examination would hardly have been sought before the fall.

Cystitis, which frequently causes adhesions at the vesico-uterine fold low down on the cervix with the bladder, brings the cervix forward with distention of the bladder and results in retroversion.

Salin's statistics show 18.2 per cent. of retroflexions in the nullipara, while in the para it is given as only 18.3 per cent. Again, in two thousand retroflexions he found that only in twelve cases could he definitely state that a retroversion followed parturition where previously the uterus was anteфлекed. These findings are so contrary to others that we must needs discard them. It is generally conceded that retroversions are almost four times as numerous in the para as in the nullipara. This is found by looking over a number of statistics.

The question arises as to what influence intra-abdominal pressure has on causing retroversions of the uterus.

Horman, in an extensive article, describes a series of experiments on the determination of intra-abdominal pressure. His contention that there is no uniform abdominal pressure is quite correct and plausible, inasmuch as the forces to be considered are a composition of hydrostatics and pneumatics, quite different to intrathoracic pressure in which pneumatics alone are concerned. He reaches the conclusion which I quote: "The frequent teachings of different authors that the cause of enteroptosis, nephroptosis, hernias, prolapse of the genital organs, the bladder and rectum, are due to a change in pressure, is not to be credited as a fact, but is a relaxation of the abdominal wall that supports the internal structures, and a laxity of the ligaments with an atrophy of the connective and fatty tissues between the abdominal organs. The static pressure on the abdominal wall, and the organs upon one another, remains the same."

Retrodeviations are of frequent occurrence and consequently we must look for an etiologic factor to explain this frequent condition. That the condition would be even more often encountered if every woman were examined is well founded on the fact that a number of cases are accidentally discovered on vaginal examination, designated as symptomless retroversions. Such cases though should not occur if good histories were taken and keener observations instituted. Nevertheless, I venture to say that we would find a larger percentage of retroversions than now if every woman were competently examined.

Some observers report cases of retroversio uteri where post partum the uterus readjusted itself in the anteverted position. This would indicate some change taking place in the ligaments of the uterus.

We cannot gainsay that the uterus is an organ which depends for its support both on the ligaments and the pelvic floor. It is a somewhat disputed point as to which is the more important in maintaining uterine support. Goffe's state-

ment that it is not the floor of the pelvis which holds up the organs in the pelvis, is not to be completely disregarded for the suspension of the uterus by the ligaments is apparently of considerable moment. The ligaments that claim our attention are the broad ligaments, the uterosacral, the uterovesical, and the round ligaments.

The round ligaments are mostly muscular although receiving some connective tissue support from the peritoneum. They also contain some striped muscle fibers derived from the oblique muscles. The reason for the latter has not been satisfactorily explained. The function of these ligaments, as Boveé states, is that of lending position to the uterus. Their attachments to the labia majora, the pubic spines, and the pillars of the deep abdominal ring, precludes injury during parturition, in other words, they do not enter into the causation of retroversion following injuries at child-birth. Too much importance must not be given to the uterosacral ligaments. They are described as flat muscular bands extending from the posterior aspect of the supravaginal portion of the cervix and course backward in a fan-shaped expansion to be inserted, a portion into the rectum as the uterorectal muscle, and the greater part into the sacral vertebræ from the second to the sacroiliac synchondrosis. These bands of tissue are so sparingly supplied with muscle fibers that they can practically be regarded as peritoneum. The function ascribed to these ligaments is the pulling back of the cervix toward the hollow of the sacrum. That there cannot be much resisting power is evidenced by the feeble muscular tissue which enters into the formation of these ligaments.

The uterovesical ligaments are even less developed than the posterior ones. They pass from the anterolateral border of the cervix to the bladder.

Those of most moment in ligamentous uterine support are the broad ligaments. They are the ones which act as the important support of the uterus from above through the ligamentum transversalis coli of Mackenrodt. This ligament is described by Mackenrodt as of great physiologic importance in maintaining the normal position of the uterus. This ligament is quite striking. The two layers of peritoneum (the broad ligaments) lie on each other at a level with the body of the uterus with very little connective tissue intervening between the layers. At the level of the cervix there is a thick band felt between the two layers of the broad ligaments. It is wedge-shaped in section, the apex of the wedge is directed upward and is just about the level of the point of entrance of the uterine artery. Traced to its distal attachment, this band is found to be formed from strong, fibrous connective tissue, continuous with that which surrounds the pelvic blood-vessels, and also that which comes through the sacrosacral notch. Some fibers are attached to the fascia at the side of the vertebral column.



This ligament is inserted into the supravaginal portion of the cervix.

Microscopically the ligament is found to consist of fibrous tissue through which are scattered a good many bundles of smooth muscle fiber. It supports a large number of veins and lymphatics as well as the uterine artery.

The action of this ligament, coming as it does with the vessels and from the posterolateral part of the pelvis, holds the cervix firmly with a pull in a slightly backward as well as lateral direction, and this pull, in conjunction with the weight of the uterus itself and the support of the pelvic floor of the cervix from below, tends to preserve the normal condition of the uterus.

The muscles and fasciae with which we are chiefly concerned, are those of the pelvic diaphragm, as it is this structure which gives the support to the uterus from below.

The levators ani muscles are made up practically of two distinct parts, the pubococcygeus and iliococcygeus. The sheaths of the levator muscles are reinforced above by the rectovesical fascia and below over the anterior half by a triangular ligament. The pubococcygei run from the posterior faces of the pubic bones downward and backward alongside the vagina and rectum, turning upward behind these viscera to the coccyx. The interval between these muscles, except where traversed by the tubular viscera, is spanned by a fascial bridge. In the median line of the fascial bridge are fused the rectovesical fascia, the sheaths of the pubococcygei, the superior layer of the triangular ligament and, at the central perineal tendon, the anterior or inferior layer as well.

The iliococcygei sweep from the white lines downward, inward and backward to the coccyx. The disposition and attachment of the fascia of the pelvic surface of the levator ani arises mainly from the inner surface of the obturator fascia. In front of this its origin extends on to the back of the pubis and posteriorly on the inner surface of the ischial spine.

Injuries to this diaphragm during parturition are very frequently followed by retroposition and prolapse of the uterus. It is here that the efficiency of the power of the ligaments to offer support becomes demonstrable. Severe lacerations of the pelvic supporting muscles and fasciae at times cause no change in uterine position. The ligaments alone, so to say, retain the organ in its position for a long period of time. Later in life as the ligaments lose their tone and become relaxed, retroversion and prolapse result.

The relation of the ligaments to the fascial structures of the pelvis helps to account for a disturbance in position of the uterus when muscular relaxation occurs.

The condition, relaxation of the muscles and ligaments, is a prime etiologic factor in a general enteroptosis, so why not a ptosis of the uterus? Relaxation of the ligaments and the laxity of the

muscles is as yet not well understood from a pathologic standpoint. We find such in a nephroptosis or a hepatoptosis without a general visceroptosis, so likewise it may be accounted for in the pelvis.

Often a careful general examination will reveal a partial visceroptosis where simple retroversion of the uterus is encountered — indicative of a Clenard's disease. Malnutrition, wasting diseases and anemia often precede or accompany this state of muscular relaxation with ptosis of the viscera, but on the other hand, in grave wasting diseases, etc., we do not have a ptosis; and again, we have a general visceroptosis occurring entirely independent of the above-mentioned conditions.

At the present time we must content ourselves with the fact that the relaxation of the muscles and ligaments takes place, without being able to explain the pathology.

Thorough research into the histopathology of the ligaments and muscles might aid us in reaching some conclusion as to the cause. Faulty dress or the corset is often given a not unimportant place in the etiology of the retroversion, but it must be considered remote inasmuch as the great majority of retrodeviations is found in women with flabby abdomens who do not adhere to the corset. Indirectly the corset may cause relaxation of the abdominal muscles by putting them out of commission, so to say, thereby causing an atrophy. Muscle tissue is prone to atrophy from non-use.

A factor which is most to be considered in bringing about retroposition of the uterus in the para, and they are by far the most frequently affected, is the one given by Olshausen. This etiologic factor practically always has its onset in the first puerperium. Rarely if ever is a retroflexion brought on from this cause in a later labor. It is explained thus: in the first pregnancy conditions are different than in the subsequent ones, for in the first pregnancy in the last weeks, often even in the last months, the fetal head lies low in the pelvis, thereby causing the cervix to become greatly thinned and the vagina is pressed downward. During the puerperium, the thinned-out cervix may lie in folds. It is this thinned and weakened condition of the cervix which leads to retroflexion. The anterior cervical lip is more thinned from the head pressure than the posterior lip, and therefore it would seem that antelexion would result more readily. This is true. Normally the puerperal uterus shows a higher degree of antelexion but there is rarely permanent abnormal antelexion. This is avoided by the constant recurrent filling of the bladder. The exception is antelexion. As adjuncts to the production of retroflexion, due to the thinned cervix of the first puerperium, we have the dorsal recumbent position, over-filling of the bladder, and intestinal distention. This class of retroversions is always mobile. A peri-

metritis or parametritis may arise causing a fixation. But that is purely accidental, due to gonorrhea, etc.

My contention that the bladder is no etiologic factor is not to be misconstrued by this statement. The greatly thinned cervix is the factor to be considered. Without this the bladder would not cause the change in position.

#### CONCLUSIONS

1. Faulty congenital development of the uterus is an etiologic factor in uterine retropositions.

2. Atrophic changes in the fascia and muscles of the pelvic floor, with relaxation of the supporting ligaments of the uterus; the uterosacral and the broad ligaments in particular, are causative factors in cases of simple retroversio uteri.

3. Changes in the cervix during the first pregnancy cause retroversions during the puerperium.

I wish to express my thanks to Dr. Arthur E. Hertzler for numerous suggestions.

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#### THE DIAGNOSIS OF RETRODISPLACEMENTS OF THE UTERUS\*

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In order to make the correct diagnosis of retroflexion one must have a clear conception of the normal position of the uterus with its cervix pointing downward and backward toward the coccyx, while the body in a gentle curve leans forward toward the symphysis; and one must furthermore appreciate the fact that normally the uterus possesses a marked degree of mobility. It is pushed backward by a distended bladder, elevated and moved forward by a loaded rectum, and forced downward by any increase of intra-abdominal pressure from coughing, straining at stool, etc. Even the regular respiratory excursions of the diaphragm will be reflected in a

corresponding motion of the uterus. We call this position and this mobility of the uterus normal because we find it in the greatest number of women who feel no discomfort and are able to fulfil all their functions of life; in ordinary parlance, in healthy women. Between the normal and the abnormal there are, however, many stages of transition, and in some cases it is exceedingly difficult to determine whether the functions of an organ present normal or abnormal features. Every organ or group of organs may offer such diagnostic difficulties. To choose only one example, the overwhelming majority of human beings develop, during the act of digestion, in their stomachs free hydrochloric acid, the absence of which is characterized by grave disturbances of metabolism. Yet there are individuals who, though they have at no time free hydrochloric acid in their stomachs, suffer no inconvenience therefrom.

Similarly there are women who have a retroflexion of the uterus without the slightest symptom. Many of these women were probably born with a retroflexion, and we cannot but pronounce them healthy. But in the vast majority of cases retroflexion causes marked symptoms which must be considered as the expression of disturbed function. The disturbed function, again, is always associated with, or rather caused by, a physical alteration of the cell structures which compose the respective organ, i. e., in our discussion, the uterus.

The truth of this statement will at once become substantiated if we follow the uterus on its course from the normal into the abnormal position. Let us begin with the primary and uncomplicated retroflexion.

When the uterus, for any of the reasons enumerated in the first paper of this symposium, falls backward it drags the tubes and ovaries along and necessarily exerts a pull and a twist on the broad ligaments which contain the blood-supply of the internal genital organs. While the arteries, owing to their more resistant muscular walls, are not affected by the kinking and stretching of the broad ligaments the weaker walls of the veins are liable to become compressed so that the return flow of venous blood may be impeded. The inevitable result is a congestion in which both the muscular walls and the mucous lining of the uterus participate. A congestion must lead first, to an edema, and if the congestion persists the edema will be transformed into tissue proliferation. Thus we see in retroflexions of long standing that the walls of the uterus become thick and hard while in the mucosa the glands increase both in size and number. This increasing weight of the uterus, which we term chronic metritis, impresses itself on the patient as a sensation of heaviness, fullness and bearing down. The changes in the uterine mucosa, called by us chronic endometritis, manifest themselves in

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increased secretion which, at first, is purely mucous, i. e., white or colorless, but may soon become yellow when a slight infection from the bacteria living in the vagina has taken place. This "leukorrhœa" is, as a rule, not irritating but sufficiently annoys the patient to ask for relief.

The existing congestion becomes greatly aggravated when at the monthly period the menstrual afflux of blood is added to the large amount of blood already present in the uterus. The menstrual flow, therefore, is profuse and these menorrhagias may in the course of years assume alarming proportions and produce a marked degree of anemia. Nor will the copious menstruation cease at the time when the climacterium usually sets in and we thus see that in many cases a retroflexion is responsible for a delayed menopause. Again, during lactation period when menstruation is ordinarily absent, retroflexion, by virtue of the congestion, may produce menstrual bleeding.

The tubes and ovaries, as we have seen, are always displaced by the pull of the retroflexed uterus and may even be buried beneath the latter. They are affected as much as the uterus by the venous congestion. The tubes, therefore, are swollen and bluish-red in color, and in the ovaries a thickening of the outermost layer, the so-called tunica albuginea, takes place. The Graafian follicles are now prevented from bursting at the regular periods of ovulation. At each period another little cyst is thus added to the number present until finally the entire peripheral zone of the ovary may become honeycombed. The tunica albuginea will stretch to a certain extent so that the ovary will grow larger. Meanwhile the imprisoned ripe follicles crowd one another for lack of space; the thin walls separating them break from pressure atrophy and a number of these cavities will blend, thus forming one or more small cysts, a condition which we term the small, cystic degeneration of the ovary. A sensation of persistent soreness in one or both groins is the inevitable result, and this ache increases to a more pronounced pain as each new follicle reaches its maximum distention on the approach of a menstruation.

Thus far the malposition has only affected the structure of the uterus and its appendages, but we now find in many cases that the surroundings of the internal genital organs also become implicated. The retroflexed uterus loses its physiologic mobility. It is a well-known fact that if any organ lies motionless within the abdominal cavity the permanent contact between the parietal and visceral peritoneum produces superficial pressure-necrosis of the surface endothelium and that the two surfaces grow together. We employ this principle in abdominal surgery when we insert Lembert's sutures in intestinal anastomoses, or when we close inguinal and abdominal hernias. In exactly the same fashion may the retroflexed uterus and its appendages gradually

become adherent to the peritoneum of the cul-de-sac and the rectum. In course of time these adhesions may become quite firm and extensive.

The base of the bladder is intimately connected with the upper part of the cervix. In retroflexion this portion of the bladder is pulled backward, and the resulting deformity lessens the distensibility of the bladder causing, in most cases, a frequent desire to urinate. Where the retroflexion is associated with a relaxed vaginal outlet there is also a partial incontinence of urine on laughing, coughing, sneezing, etc. These vesical symptoms are greatly aggravated in retroflexion of the pregnant uterus and may even lead to the so-called paradoxical retention of urine where the bladder is enormously distended and only the overflow constantly escapes in involuntary dribbling. Ammoniacal decomposition of the remaining urine may cause a gangrenous cystitis, and a fatal issue is by no means a rare occurrence in these complicated cases.

Another organ which is always affected by the uterine displacement is the rectum. The heavy uterus compresses the rectum and thereby produces constipation. The patients themselves feel an obstacle to defecation which becomes painful on straining. There is furthermore a mechanical disturbance in the venous circulation of the rectum which either produces, or aggravates already existing, hemorrhoids.

At the same time there is a pressure exerted on the sacral nerves thus producing the most common symptoms of retroflexion, namely, backache which is usually localized in the lower part of the lumbar spine or the sacrum. If the uterus, which hardly ever lies exactly in the median line, rests on one of the sciatic plexuses, the patients complain of pathologic sensations in the corresponding lower extremity. These sensations may vary in intensity from simple numbness to complete paresis.

This profound disturbance of the mechanics of the pelvic viscera, with its structural changes of the afflicted organs and its marked train of local symptoms, exerts necessarily a decided influence on the entire organism of the patient. These general symptoms, for the most part, are of a nervous nature and identical with those produced by other diseases of the internal genitals. Persistent headache, both on top and in the back of the head, palpitations of the heart, dyspnea, a general lassitude, heavy but not refreshing sleep, or on the other hand an easily disturbed slumber, and great irritability form the host of these symptoms.

It is generally conceded that retroflexion in manv, though by no means in all cases, causes sterility. The promptness with which conception often follows our therapy has almost the value of a laboratory experiment. In some cases it seems possible that the tubes are kinked in such a way as to bar the passage of the spermatozoa; or the sperma but not the fertilized ovum may

pass through the obstacle in the tube. These are the cases of ectopic pregnancy in which, on operation, we find no trace of old adhesions or other anomaly of the internal genitalia.

In a perfectly normal genitale, menstruation is practically painless. In retroflexion, on the other hand, there is always more or less dysmenorrhea. The explanation is simple enough. You will remember that the amount of menstrual flow is greatly increased with the uterus in malposition, and if you further consider that the endometrium is thickened and the folds of the swollen mucosa close the narrow internal orifice in the manner of a valve, you will perceive at once that the menstrual blood must, for a certain length of time at least, be retained within the uterine cavity thereby distending the latter and acting like a foreign body of which the uterus tries to rid itself by labor-like contractions. Dysmenorrhea in retroflexion, however, is not always due to the malposition of the uterus alone, and this brings us to a second and very important phase of our subject.

Thus far we have taken into consideration only cases of primary and uncomplicated retroflexion. But in listening to the paper on the etiology of retroflexion you have already realized that retroflexion is very frequently caused by other affections of the internal genitalia. If, for instance, a patient had acquired a gonorrheal pus tube with formation of adhesions which, in turn, had pulled the uterus backward, it is apparent without further comment that symptoms due to the retroflexion as such are secondary to those produced by the primary affection. Or, if an ovarian cyst has pushed the uterus into retroflexion, the symptoms due to the latter will be almost insignificant beside those caused by the pressure of the ovarian tumor. In discussing, therefore, the symptomatology of retroflexion we must needs bear in mind the symptoms of any complicating disease.

It is a peculiarity of diseases of the female organs that their symptoms are at best only suggestive. You cannot make an accurate diagnosis on symptoms alone without making a thorough physical examination. The manifestations of the various gynecologic affections are too much alike to be pathognomonic for any one disease. This is particularly true of retroflexion. Fortunately bimanual examination will in most cases quickly elucidate us on the condition present. The speculum examination is of no value to us in determining a retrodisplacement and can therefore be dismissed. The examination with the uterine sound is still widely employed for the diagnosis of retroflexion, but a word of warning regarding its use may not be amiss. It is true that in a very few cases the uterine sound may be of some assistance, but its meager advantages are more than outweighed by the numerous dangers accompanying its introduction. I only

mention the chance of perforation of the uterus, the possibility of carrying infection principally gonorrhea through the cervix into the uterine cavity, or the possibility of stirring up old inflammatory processes that may have lain dormant in the Fallopian tubes. Furthermore we may have to deal with an early pregnancy in a retroflexed uterus where the introduction of a sound would bring about an abortion, and finally there are cases on record in which a sound introduced into the uterus has caused, by way of reflectory uterine contractions, the rupture of an extra-uterine pregnancy which had been overlooked.

All these dangers can be avoided if we do away with the uterine sound, or if we restrict its use to exceptional cases in which we have positively excluded any complication.

Moreover, there is no need for any other diagnostic method than bimanual palpation. It requires but little practical experience to notice, on introducing one or two fingers into the vagina, that the neck of the uterus is unusually low, i. e., nearer the vaginal outlet than normally. The axis of the cervix points in the axis of the vagina or even toward the symphysis and the upper portion of the cervix, particularly on its posterior surface, seems to be unusually long. If now the other hand be placed on the abdominal wall above the symphysis, the two hands palpating toward one another fail to detect the uterine body in its normal place. The front part of the pelvic cavity is empty so that the two hands will meet, while in the sacral hollow, usually a little to the left or right, the uterine body with its characteristic contours can be mapped out.

This procedure, like everything else in medicine, requires a little skill; but this experience can quickly be acquired if the examining physician will only see to it that the conditions which facilitate bimanual palpation be as favorable as possible. These conditions are in short as follows: bladder and rectum should be empty. All garments constricting the abdomen, chiefly the corsets and bands, should be taken off or loosened. The patient should lie on her back with the knees flexed and be instructed to breathe regularly through her mouth. To tell a patient to relax usually results in her becoming more conscious of herself and resisting involuntarily. Divert her attention by asking questions while you make your examination, and above everything else try to render your palpation as painless as possible. A gentle hand will elicit more information in one minute than brute force in fifteen. If your patient is nervous, a little patience and encouragement on your part will often accomplish your ends.

Recto-abdominal palpation is of invaluable advantage and should frequently be resorted to, but if there is still any doubt left after such examination, or if the uterus be too small and the



abdominal walls too thick, an examination under anesthesia is strictly indicated.

In every examination for retroflexion we must remember that not every resistance behind the cervix need be the uterine body. Only if the cervix can be plainly felt in continuity with the mass in the cul-de-sac is our diagnosis established. In all other cases we should consider the possibility of a retro-uterine tumor which forces the uterus forward, is separate from the latter, and differs from it in size, form and consistency. Such tumors may be a subserous or interstitial fibroid, a swollen tube or ovary, an old exudate in the parametrium or cul-de-sac, or a hematocele. Again, a mistake is possible in cases of elongated cervix pointing forward with a small uterine body lying in extreme ante flexion such as we find not infrequently in young virgins. In such cases of difficult differential diagnosis, we may be forced to resort to the sound, if only we use it very cautiously.

Having, at last, established the fact that, in a given case, the uterus lies retrodisplaced, the question arises whether we have to deal with a retroversion or a retroflexion. The two conditions differ from one another in so far as in retroversion the axis of the uterus is a straight line while in retroflexion the body is bent from the cervix so that the uterine axis is a curved line. In most of our American text-books there is usually no sharp distinction made between the two positions. For the sake of accuracy, however, and for practical reasons as well, we should insist on a more precise differentiation. Generally speaking, retroflexion is the more troublesome of the two and will more often require our intervention. This rule has but one exception, namely, if the malposition be complicated by pregnancy. A pregnant uterus lying in retroflexion rights itself in a great many cases, while a pregnant uterus in retroversion can never ascend into the abdominal cavity spontaneously. These are the cases touched on above which produce the most serious symptoms and may ultimately lead to death. It follows that only an accurate recognition of the particular type of displacement will prevent us from vainly waiting for a spontaneous cure to occur and will enable us, by timely treatment, to save women who otherwise might lose their lives.

The last question which we must put to ourselves in diagnosing a retrodisplacement is this: Is the uterus movable or fixed by adhesions? Our treatment depends entirely on the correct answer. To determine this question, we must try to replace the uterus into its normal position. This replacement of the uterus, however, constitutes at once the first step in our therapy and its discussion must, therefore, be left to the remaining paper of this symposium.

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## THE TREATMENT OF RETRODISPLACEMENT OF THE UTERUS\*

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The treatment of retrodisplacement of the uterus has become largely surgical since Alexander of Liverpool performed his first operation of inguinal shortening of the round ligaments in 1881. Since then many modifications of Alexander's method have been devised: vaginal shortening of the round ligaments, Vineberg, Ries; intraperitoneal shortening of the round ligaments, Wylie, Mann; round ligament suspension, Olshousen, Ferguson, Gilliam, Montgomery; uterovesical suspension, Byford and others; shortening of the uterosacral ligaments, Goffee, Bouce, Sawyer; ventrofixation, Kelly; vaginofixation, Dührssen, Mackenrodt; plication of the anterior fold of the broad ligaments, Coffe. All of these and many others are being practiced in the correction of retrodisplacements.

I have nothing new to offer in the way of a method, but will attempt a consideration of the relative merits of the different methods which are most generally employed and have been in use for a sufficient period of time to rightly judge of their value.

In considering the value of a method in the correction of retrodisplacements of the uterus it is necessary to take into account: (1) Permanency of results. (2) Non-interference with function. (3) The correction of pathology. (4) Relief of symptoms.

There is, perhaps, no single method of operating which could fill every indication as a routine measure, but rather a method should be selected the best suited to each individual case.

The mechanism of the normal suspension of the uterus in the pelvis should be most carefully considered in formulating a method of treatment for the correction of a malposition of this organ. Any method of correction which violates the principles of mechanics involved in its normal suspension is quite likely to interfere with function, and otherwise prove unsatisfactory. The deductions to be made from a proper understanding of the mechanics involved in the normal suspension of the uterus in the pelvis are:

1. That the uterus is not intended to occupy a distinct position, but that owing to the character of its mechanical supports and its relationship to other pelvic organs, it should change its position to conform to existing physiologic and mechanical conditions.

2. In order that the functions of the pregnant and non-pregnant uterus be maintained normally, it is necessary that the uterus should possess the range of motion allowable from the character of its normal supports.

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3. That if from design on the part of the surgeon, or from pathologic change in the uterus and its ligaments, it should become fixed in a given position, function is interfered with.

The treatment of retrodisplacements of the uterus, after an experience of thirty years of surgical effort, is about reaching a sane and conservative position in gynecologic practice. Methods which have proved ineffectual in end results, and those which are antagonistic to function, are being discarded for more physiologic and better methods.

External shortening of the round ligaments for the correction of retrodisplacements of the uterus should occupy a place only in history, as the consensus of opinion now is that it is ineffectual in end results and its range of adaptability occupies very narrow limitations. Thousands of women have been subjected to this method who could have been better treated with pessaries, and as many more in which the pathology was not reached or eradicated by such a procedure. The reasons why this method should be abandoned are:

1. It is only applicable in cases in which there is no pathology in the uterus and adnexa and in which descensus does not enter as a factor.

2. The large percentage of recurrences after three years, especially where pregnancy has occurred.

3. The difficulty of determining by physical examination the exact conditions within the pelvis, which is essential when this method is selected.

I have on several occasions found, on opening the abdomen, intestinal adhesions to the uterus and adnexa, occlusion of the Fallopian tubes, cystic conditions of the ovaries, which I had failed to recognize by a physical examination.

#### INTRAPERITONEAL METHODS OF SHORTENING THE ROUND LIGAMENTS

Time will not permit of a consideration of the different individual methods of intraperitoneal shortening of the round ligaments; all of them are to a degree successful in the correction of the displacement, and all are subject to about the same criticisms, with the possible exception of the Baldy-Webster method.

The arguments which have been advanced in favor of round ligament shortening in the correction of retrodisplacements are:

1. That normal ligaments are utilized in correcting the displacement.

2. That the normal range of mobility of the uterus is but slightly interfered with.

3. Non-interference of function.

Clinical evidence in abundance supports these claims, but it shows as well that the round ligaments are ineffectual in permanently correcting all classes of cases of retrodisplacements.

The character of union obtained in round ligament shortening is sero-serous, which it has been definitely shown is not permanent, but will thin out and recurrences take place.

In cases of retrodisplacements in which the uterus is of normal size and weight, in which descensus beyond the physiologic limit does not exist, round ligament shortening will prove reasonably effectual.

The Webster and Baldy methods have proved more effective in results than the other methods of round ligament shortening. In Baldy's method the round ligaments are cut loose from their uterine attachments, and drawn through and attached to the posterior wall of the uterus, securing a serofibrinous union.

Schumann<sup>1</sup> reports his observations in 250 cases in his own work and that of Baldy. When the technic had been properly carried out not a single recurrence had taken place. In the Webster method the round ligaments are doubled on themselves and drawn through openings in the broad ligaments, sewn together and to the back part of the uterus.

I have performed the Webster method in fifty well selected cases, in which there was but little pathology in the uterus, with satisfactory results and without any known recurrences.

#### VENTRAL SUSPENSION BY MEANS OF THE ROUND AND BROAD LIGAMENTS

The Gilliam method seems to be the one most generally practiced, possibly on account of its simplicity and ease of accomplishment.

This method secures a firm anchorage of the round ligaments and their peritoneal coverings to the abdominal wall, does not hold the uterus in a fixed position, and does not interfere with function.

Humiston<sup>2</sup> reports 103 Gilliam operations with the results after three years. The results were in every sense satisfactory; no recurrences. There were no deaths in the series nor were there complications at delivery in those that became pregnant.

Kohlmann<sup>3</sup> reports 125 cases of round and broad ligament fixation, in which the Bummis method was employed. Forty-five cases of the series were examined one year after operation. The uterus in all cases examined was found in normal position. Two cases were examined through a laparotomy incision. In both instances the uterus was in normal position. The Ferguson and Montgomery methods involved the same principle as the Gilliam method. Round ligament suspension would seem to offer more lasting and better results than round ligament shortening.

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## VENTROSUSPENSION, KELLY'S METHOD

There are still many operators who use this method as a routine measure and claim satisfactory results.

Holden<sup>4</sup> gives a report of 445 cases of ventrosuspension at the Johns Hopkins Hospital, with the following conclusions:

1. Successful symptomatic results after suspension of uterus to anterior abdominal wall in about 60 per cent. of all cases in which the retro-position is the sole or most prominent abnormal condition. Prognosis is somewhat better in retro-position associated with relaxed vaginal outlet, provided the outlet also be repaired, than it is in retroposition alone.

2. The great majority of multiparæ with symptoms caused by retroversion of the uterus suffer from dysmenorrhea (90 per cent.). Multipara with retroversion.

3. Suffer from dysmenorrhea much less frequently (55 per cent.). Fifty to sixty per cent. of all cases of dysmenorrhea in which retrodisposition are relieved of dysmenorrhea by suspension of the uterus.

4. The suspensory ligament is usually a band of one or two cords; the length averages 2 to 5 cm. After one year the length of the ligament does not depend on the time elapsing since the operation or the thickness of the ligament.

5. The great majority of patients who have had the suspension operation performed have no adverse symptoms referable to the suspension during pregnancy or labor. The most frequent adverse symptom which can be referred to operation, is abdominal pain during pregnancy.

6. A recurrence of the retroposition may occur after labor but does not necessarily follow. If labor does not intervene the percentage of recurrence is not more than five.

If examinations could have been made on all of the 445 cases of this series the percentage of recurrences would probably be less than five.

E. T. Taylor<sup>5</sup> of London, in reporting a number of cases of retroversion treated by hysteropexy and abdominal ligamentopexy and curettage with results, concludes: Ventrofixation, because of the complications in subsequent pregnancy and labor is gradually being superseded by abdominal ligamentopexy where the uterus is retained in position by more physiological methods which are intended to obviate the dangers to which ventrofixation undoubtedly exposed the patient in the event of pregnancy and labor.

R. R. Smith<sup>6</sup> gives a report of nine cases of bowel obstruction, due to ventrosuspension of the uterus: one being a case of his own, two by Rufus Hall of Cincinnati, and six from literature. The author enumerates the evil results of ventro-

suspension as follows: thinning of the posterior uterine wall causing obstruction to the passage of the child; and upward and backward displacement of the cervix resulting in ineffectual labor pains. These distortions of the uterus may cause a malposition of the child. There are numerous reports of difficult labors that have finally ended without intervention, or have been terminated by forceps, and over forty cases of Cesarean section which have necessarily been performed for relief. Aside from these complications, abortions, premature labor and post-partum hemorrhage have been ascribed, with more or less justification, to the operation.

## VAGINOFIXATION

This method, though still practiced in Germany and England, has not grown in favor in this country. The percentage of recurrences is greater than from any other method, and the hindrances in subsequent labors are on a par with ventral fixation.

In the evolution of surgical methods for the correction of retrodisplacements, the pessary of our forefathers has almost been forgotten and I shall probably be criticised by the surgical enthusiast for attempting its resurrection. I wish, however, to condemn the obsolete practice of external round ligament shortening in cases of simple retrodisplacements, and recommend in its stead, the treatment of this class of cases by the proper application of the pessary.

In the treatment of cases requiring surgery I am of the opinion that the abdominal incision offers the best opportunity for thoroughly complete work. In the selection of a method at the time of operation the surgeon should be influenced by the pathologic findings in the pelvis. I consider the Baldy-Webster and the Gilliam methods to be a distinct advance over the older methods of round ligament shortening and ventrosuspension. I have employed these methods almost exclusively in the last eight or nine years with satisfactory results. It is to be conceded that any method of correcting retrodisplacements of the uterus should include, when necessary, repair of the pelvic floor.

## DIAGNOSIS OF CHRONIC PANCREATITIS\*

## Historical Sketch

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Toward the end of the sixteenth century, Alberti (1578) and Heurnius (1599) attempted to describe the diseases of the pancreas in a comprehensive manner. The endeavor was productive of no permanent results because at that time

4. Holden: *Am. Jour. Obst.*, 1905, 51, 477.

5. Taylor: *Arch. Middlesex Hospital*, London, 1909-10, 16-18, 70-83.

6. Smith: *Physician and Surgeon*, Grand Rapids, Mich., 1909, 31, 531-536.

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911.

reliable clinical and physiologic knowledge of the subject was wanting, and the ideas of the function of the pancreas were indefinite. Not until the discovery of the excretory duct in 1642 by Wirsung, was it looked on as a special organ. This discovery must be considered the first step to a definite and successful investigation of the physiologic and pathologic importance of the pancreas.

The medical literature of the eighteenth century supplied the earliest facts concerning its pathology. The most important clinical contributions of this time were furnished by: Holdefreund, 1713; Buechner, 1759; Barfarth, 1779; Rahn, 1796; Siebald, 1797; while the anatomical data of that time was supplied by Morgagni, Lientand and Conradi.

The authors of the first half of the nineteenth century who advanced the pathology of the pancreas, were: Hoffman in 1807, Harles in 1812, R. Bright in 1833, J. Frank in 1843.

Those of the latter half of the nineteenth century up to 1889, who gave reliable facts concerning the clinical pathology, drawn from a few carefully studied cases of chronic pancreatitis, were: Klebs, Rokitsansky, Virchow and Cruvelhier, while the work on the physiology of the gland was done by Bernstein, Kuehne, Senator and Bernard. The knowledge of the disease of the pancreas that we are in possession of to-day is almost entirely the product of investigation made since 1888, and this knowledge cannot be said to be accurate.

The work of Fitz in 1889 coincided almost exactly with that of Minkowsky and Von Mering, and their work is the starting point of all recent advances in the study of pancreatic disorders. Flexner and Opie in this country have done for our theoretical knowledge what Nicholas Senn, followed by Mayo-Robson, have done on the side of practical treatment. Since we have learned that the chronic inflammatory disease of the pancreas is by no means a rare condition, we take it more often into consideration when dealing with the possibilities in epigastric disturbances.

Before trying to enumerate the symptoms and signs by which chronic pancreatitis might be recognized, it is necessary to know what the organ does when functioning normally.

The pancreas has two secretions, an internal and an external one. The internal secretion is assumed to be dependent on the islands of Langerhans, the polygonal cells which have no secretory duct, which have no anatomic connection with the pancreas, and which are surrounded by and are full of blood; whose secretion into the lymphatics and blood controls the carbohydrate metabolism.

The external secretion is poured through the main excretory duct into the duodenum, and is a powerful factor in digestion depending on its three ferments, viz.: Steapsin or fat-splitting ferment; amylpsin, or diastatic ferment; tryp-

sinogin or proteolytic ferment, which on its arrival in the duodenum or intestine meets the enterokinase of Pawlow, and is activated or converted into fully active trypsin. The ferment rennet (of Wohlgenuth) has so far not proven itself. Just how the presence or absence of these ferments aids in making a diagnosis of chronic pancreatitis will be seen later.

*Etiology.*—The cause of interstitial inflammation of the pancreas is often obscure, but since there is no dividing line between the subacute and the chronic types, the etiologic factors in either case may be divided into three classes: infection, toxic, degenerative.

The histories of cases of chronic pancreatitis not infrequently show a record of a past typhoid infection. In a case reported by Moynihan, the typhoid bacilli were found. More frequently, however, is the *B. coli communis* discovered as the cause of pancreatic disease. The experiments of Carnot support this view; experiments in which it was found that the pancreas was invaded by the *B. coli communis* following an injury to the gland; as for example, after infections of tuberculin, *B. tuberculosis*, after operations on the biliary tract or after the injection of croton oil into the duodenum.

It is not uncommon to find in the pancreas small collections of round cells, lying around some of the smaller ducts which in all probability represent the effect of irritants and which is the beginning of a fibrosis.

Sidney Phillips<sup>1</sup> reports a case of scarlet fever complicated by pancreatitis, jaundice and parotitis. In Kansas City in the spring of 1910, such a case occurred in the infectious ward at the General Hospital. At the time of desquamation there appeared a gradually deepening jaundice, with marked and rapid emaciation followed by death. While there was no autopsy it is fair to say that this was a case of suboculi pancreatitis. This case was observed closely by Dr. J. E. Hunt. Osler reported fifteen such cases out of 5,000 observed. Chalmers Watson<sup>2</sup> reports a case of pancreatitis complicating malaria with tenderness and jaundice. Gordon Sharp<sup>3</sup> reports a case of a boy without mumps suffering from pancreatitis in a house with a sister who had mumps. Hoggart of Nashville, Tenn., says that 10 per cent. of the cases of mumps are complicated with pancreatitis.

To the infectious causes already mentioned, viz.: malaria, typhoid, mumps, scarlet fever and tuberculosis, may be added syphilis and influenza. When we take into consideration the close relation between typhoid fever, gall-bladder disease and pancreatitis, it is rather curious that the pancreas does not oftener become infected. It proves that its resistance to infection is good so long as there is no mechanical interference with

1. Phillips: Lancet, London, March 21, 1908.

2. Watson: Idem., March 28, 1908.

3. Sharp: Brit. Med. Jour., March 4, 1908.



its outlet. Furthermore, the cases of induration of the pancreas reported as a result of infection, as mentioned above, seem to teach that "so-called catarrhal jaundice" is more often the result of an indurated head of the pancreas than to a thickening of the duodenal mucosa—since 66 per cent. of the common ducts pass through this head.

#### ETIOLOGY

*Toxic Causes.*—Among the toxic causes of pancreatitis, alcohol stands first.<sup>4</sup> In over 50 per cent. of all cases of cirrhosis of the liver, the pancreas is known to show the same pathologic changes. In twelve cases of hepatic cirrhosis reported by Steinhaus<sup>5</sup> eleven showed chronic pancreatitis. In eight cases of hepatic cirrhosis reported by Lafas all showed an induration of the pancreas. Post-mortem findings in alcoholics frequently show the pancreas alone indurated. The fibrosis in these cases is more than could be expected from portal stasis alone.

Carnot thinks the elimination of tuberculous toxins in generally tuberculous subjects is a frequent cause of chronic induration of the pancreas. Clifford Allbutt reports a case of chronically infiltrated pancreas in a child of four years, dead of pulmonary tuberculosis.

Fibrosis of the head of the pancreas due to the obstruction in the cystic, common or pancreatic duct, is probably also toxic, due to pancreatic secretion under tension.

*Degenerative Changes.*—Fibrosis of the pancreas is also the result of degenerative changes. Quite a large per cent. of persons dying from all diseases (and past the age of 40) show various grades of induration of the pancreas. Out of 100 unselected cases dying from all diseases and examined previous to 1905, Allbutt found fifteen cases of marked sclerosis. Fifty-four of these 100 cases were past 40, and out of the fifty-four, cases ten had marked chronic pancreatitis. Out of 100 selected cases found since 1909, seventeen were markedly fibrotic and ten of the seventeen cases were past the age of 40.

With these degenerative causes of chronic pancreatitis may also be mentioned the long standing cases of passive congestion due to chronic myocardial insufficiency. In senile cases the arteries are sclerotic, and the hardened gland may be looked on as secondary to atrophy, due to deficient blood-supply. Also there is frequently found in malignant pancreas some fibrosis which is looked on as a result of stasis or to the toxemia produced by the cancer. It cannot be said on the other hand that the fibrosis is not the etiologic factor in the production of the malignancy.

*Diagnosis.*—In making a diagnosis it is first necessary to demonstrate that we are dealing with a pancreatic disease and next to know what the affection is.

The clinical phenomena may be divided into general and functional symptoms. Under the general symptoms may be found:

*I. Gastric Disturbance and Emaciation.*—Twenty years ago Fitz laid great stress on occasional attacks of indigestion characterized by epigastric distress, abdominal discomfort, loss of gastric secretion, bloating and belching.

Following one of these attacks there arises a rapid and progressive emaciation with loss of strength and appetite. In connection with this—and in view of the fact that some cases do not lose their appetites and can eat large meals—may be mentioned the experiments of De Graaf, by which he demonstrated that with a pancreatic fistula and a voracious appetite dogs rapidly and progressively became emaciated.

*II. Pain Variable and Unreliable.*—Severe pain in a certain percentage of cases is absent. In others a severe intermittent pain is felt in the epigastrium. It comes on suddenly and may be taken for biliary colic, but is different in that the pain of gall-stones is transferred to the right breast and shoulder, while the pain of pancreatitis is referred to a point a little above and to the right of the umbilicus. This is known as Robson's pain point. Sometimes pain is felt in the lumbar region and in one of Allbutt's cases the pain was dull in character, constant and low in the abdomen. The pain of pancreatitis is too variable to indicate a great deal.

*III. Jaundice.*—Since 63 per cent. of common ducts pass through the head of the pancreas a thickening of that part will produce jaundice. This jaundice as a rule is gradual, progressive, severe and unremitting. It is not sudden in onset like the jaundice of gall-stones, nor does it as a rule follow a colicky pain; furthermore the jaundice of gall-stones is variable in intensity. The jaundice commonly known as catarrhal, lasting from three to eight weeks and even longer, is in all probability the result of a subacute or chronic pancreatitis.

*IV. Tumor.*—Because of its location a tumor of the pancreas in most cases is not easily palpated. An exception to this is found when the tumor is of the tail of the pancreas. These tumors are usually cystic, present to left of the median line, are not covered by the liver and are easily palpable. Large tumors of the head of the pancreas may be mistaken for pyloric, hepatic or duodenal enlargements. Pyloric tumors are apt to change their position with each respiration, while pancreatic tumors are as a rule immovable. Tumors of the tail of the pancreas which present in the region of the body of the stomach may be distinguished from tumors of the stomach, first, by inflating the stomach with gas. If the tumor is of the pancreas it will become less distinct as the stomach fills, if of the stomach it will not become so indistinct; second, by the history of the case.

4. Allbutt's System of Medicine.

5. Steinhaus: Deutsch. Arch. f. klin. Med., Bd. 74, p. 537.

In this connection Courvoisier's sign should be mentioned because of its value in differentiation. In chronic pancreatitis with obstruction to the common duct, there is in most cases a widely distended gall-bladder, while in common duct stone the gall-bladder is empty and shrunken.

Pressure of the pancreatic tumor may lead to hepatic enlargement and ascites, also the pressure on the duodenum produces the symptoms of pyloric stenosis, viz.: retention of chyle, copious vomiting and gastric dilatation.

*Functional Symptoms.*—The foregoing symptoms relative to the differential diagnosis between chronic pancreatitis on the one hand, and gall-bladder disease and malignancy of the pancreas on the other, frequently leave us entirely at sea. "Under such circumstances we may resort to the examination of any functional disturbance that may be caused by pathologic changes in this gland" (Stadtmueller). It has been demonstrated that only in advanced cases of chronic pancreatitis are these functional findings of very great aid.

The examination of the characteristic, large, pale, and offensive stool, for signs of perverted pancreatic secretion can be made only in an indirect manner, yet at the same time valuable aid may be gained therefrom.

The presence of connective tissue in the stool, signifies that the gastric secretion is deficient, because pancreatic secretion has nothing to do with connective tissue. If the muscle fibers, however, are found in rather large quantity—provided there is no diarrhea to hurry the contents through the alimentary tract before the trypsin can act—it is a sign of functional pancreatic insufficiency. These two signs are valuable, yet Mayo-Robson and Cammidge think that muscle waste is met more frequently in carcinoma than in chronic pancreatitis.

Schmidt's nuclear test is thought by many to be of value. The test is made by sewing small pieces of meat in silk bags, hardened in alcohol, and fed to patient. If on recovery the nuclei are unchanged it indicates an insufficient pancreas. Brugsch considers this test of no value; believing as he does that pancreatic juice has nothing to do with nuclear digestion, that this is accomplished solely by the intestinal juices and bacteria.

The digestion of fats is of diagnostic importance. Pancreatic lipase has but a feeble action toward emulsifying fats; its function is that of splitting fats into glycerin and fatty acids which combine with the alkali of pancreatic juice and form soaps. Since this is true the clinical fact may be deduced, viz., that the pancreatic juice in the intestines is insufficient. The soaps will be diminished, while in a pure obstructive jaundice the soaps are increased; and the amount of total fat will be increased in both cases.

The Volhard oil breakfast has in the absence of duodenal stenosis some diagnostic value. If

200 c.c. of olive oil be instilled into the stomach with a tube (to avoid nausea) and removed in thirty minutes and allowed to stand for a few minutes it will divide itself into two layers. The upper will be oil stained with bile, the lower layer will contain the pancreatic juice. Tests for trypsin will show whether or not the pancreas is insufficient.

*Examination of Urine for Evidence of Chronic Pancreatitis.*—This has to do with the internal secretion of the pancreas, while the examination of the stool will show only a sufficient or insufficient external secretion. Since the internal secretion of the pancreas is produced by the islands of Langerhans, and since a very small portion of the gland will suffice to carry on the carbohydrate digestion, a spontaneous glycosuria would indicate a rather extensive fibrosis of this organ. This sign is rare being found only four times in sixty-five cases of chronic pancreatitis by Robson. This functional insufficiency as regards the internal secretion is disclosed by the test for alimentary glycosuria.

Strauss and Moritz have found that the assimilation limit for sugar in the normal individual is 200 grams, which means that you can give 200 grams of sugar without any secretion of sugar. If 100 grams were given to an individual on an empty stomach and was followed by dextrose in the urine it would indicate an insufficient pancreas. This list has been used to great advantage in many cases of chronic pancreatitis.

The Cammidge is probably dependent also on the internal secretion. Wynhausen thinks this reaction is of little value in the diagnosis of pancreatitis, and especially in a case of carcinoma.

It may occur in any disease where there is nuclein destruction, as in pneumonia, tuberculosis, appendicitis and peritonitis.

Hogen found it of great diagnostic help in almost every case.

In Knoenig's ninety cases he found it present in 80 per cent. and his findings coincided with the autopsy findings. J. B. Schmidt considers the Cammidge reaction of value if symptoms of chronic pancreatitis are present.

Wilcox, Horn, Cleland and Hess think it of no value and Holdone and Evans agree with their reports.

Chalmers Watson has examined the largest number of cases—250—and is enthusiastic about it.

Mayo-Robson agrees with Watson. The Mayo clinical reports given by Pitcher conclude that a typical positive reaction with a negative control is pathognomonic of chronic pancreatitis.

*Diagnosis.*—There can be no doubt that the diagnosis of chronic pancreatitis in the living individual is the most difficult problem that confronts us to-day. Since the vast majority of these cases are discovered for the first time on the post-mortem table, it is clear that the milder



cases run their course without giving rise to any characteristic symptoms; but the severer cases, with which we occasionally come in contact, give symptoms and signs by which the disease may be recognized, viz.:

1. Jaundice, usually unremitting and severe.
2. Emaciation, usually rapid.
3. Pain, referred to the left and back.
4. Robson's pain point a little above and to the right of the umbilicus.
5. Distended gall-bladder—Courvoisier.
6. Tumor not changing with respiration.
7. Large, pale, fatty and offensive stools.
8. Anemia of mild grade until disease is severe.
9. Cammidge reaction present.
10. Alimentary glycosuria.
11. Great number of muscle nuclei and fibers where there is no diarrhœa.
12. Volhard's oil breakfast positive.
13. Hepatic enlargement with ascites in severe cases.

With these symptoms and signs present, or a majority of them, at least, one's attention would be directed to the pancreas and the conclusion would be that probably a severe pathologic lesion was present. Since most of these symptoms are found also in carcinoma of the head of the pancreas a differentiation is many times impossible. There is no symptom-complex by which chronic pancreatitis may be definitely diagnosed.

I am indebted greatly to Dr. Stadtmüller of New York City, whose article, in *Archives of Physical Diagnosis* of first quarter of this year, has helped me not a little.

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## GENERAL PRINCIPLES OF THE OPERATIVE TREATMENT OF CARCINOMA\*

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The statement may be safely made at the outset that in principle the proper surgical treatment of tumors is to remove all the aberrant growth and no more. In many of the benign tumors, because of their relationship to the surrounding tissue, we are able to carry out this principle in an ideal manner. Thus in most lipomas we are able to shell out the tumor and leave the surrounding structures intact. Were we able to identify all of the malignant tissue in cancer this principle would be equally proper. Since we are unable to do this, because of the nature of the growth and the disposition to disseminate, we are obliged to broaden our operations to meet this condition. The proper extension of the operation must

depend on a knowledge of the habits of growth of a tumor. In order to meet these extended requirements the essential biologic type to be attacked must be understood. With this knowledge in mind, given a knowledge of the anatomy of the region in question, we are able to predict the region in which metastasis has taken place, or is most apt to take place, and we may meet or anticipate this accident. In order to plan properly an operation, a closer examination of these factors is necessary, and this may be done most conveniently under a number of subheads, viz.:

1. *General Conception of the Biology of Tumors.*—Theories of the nature and causation of tumors have varied from the humeral and blastern theory, through the more modern parasitic theory finally to settle definitely on the theory that the cancer cell is the parasite itself. This means that changes in the environment give the cell the power of limitless proliferation. The sources of these cells may be congenital displacements. This is seen in the mixed tumors of the kidney, parotid or testicle. In many instances the adult cell is the starting point. The most familiar example of this type is the carcinoma of the lip and of the cervix. The factors which cause the cells to proliferate have been the subject of the most painstaking study but even yet cannot be definitely stated. We know that chronic irritation, as in the locations cited, often preceded the development of malignancy, and that certain types of benign tumors, notably uterine myomas, tend to undergo malignant changes. Much labor has been expended on the solution of this problem and, while a definite solution has not been reached, evidence is accumulating in support of the theory that local chemical changes are responsible for the limitless cell proliferation. This knowledge permits us in many instances to perform prophylactic operations, for instance in the mixed tumors which sooner or later take on rapid growth, adenomas of the breast which sometimes do so. In these and many others the future course can be predicted with a great deal of certainty and may be prophylactically excised. If we really believe that 70 per cent. of stomach cancers were dependent on ulcers this would furnish a fruitful field for prophylaxis and we would be excising ulcers in order to prevent cancer; but our clinical sense saves us from the folly of statistics.

2. *The Specific Knowledge of the Kind and Character of Tumors in Question.*—It is obviously important that prophylactic operations be planned as prophylactic operations and not as operations for malignant disease. While it is manifestly proper, for example, to excise an adenofibroma of the breast, it is improper to excise it as if it were malignant and the mutilating operation performed as proper for breast carcinoma. Of almost equal importance is the proper estimation of the kind of carcinoma at hand and the stage of

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development it has reached when the patient appears for treatment. It is the patient and not the diagnosis which is to be operated. In other words not all disease designated by the word carcinoma are to be treated on the same principle. In some of these we have come to recognize such a difference. Chief among these are the basal-celled cancer of the face which we excise locally or employ the x-rays. Any sort of treatment cures these. Unfortunately the cures applied to these tumors is too often extended to analogous tumors elsewhere with similar appearance but with distinctly different biologic characteristics and the results are usually disastrous. Certain affections of the appendix, often called cancer, though in the vast majority of cases entirely innocent, threaten to upset the few things we have learned about carcinoma of the digestive tract. In these, as in no other condition, is emphasized the fact, too often overlooked by the surgeon, that it is the life history of a lesion and not its microscopic appearance that gives a lesion its place in clinical surgery.

This specific knowledge of the kind and character of a carcinoma has an even greater application at the other end of the scale. A thorough knowledge of the nature of some tumors might prevent us operating on patients in whom a cure is hopeless. As instances, may be mentioned mammary tumors with lung metastasis or obscure bone trouble; pelvic tumors with varicosities over the lower abdomen; melanomas with lymph metastasis. The utter uselessness of any attempt at cure is recognized by all. In many conditions life would be prolonged more by conservative operations than by attempts at radical cure. This applies particularly to squamous-celled carcinomas situated in regions where dissemination is particularly likely to be hastened by incomplete operations, notably the tongue, the floor of the mouth and the cervix.

*3. Life History of the Tumor as an Aid to Diagnosis and Prognosis.*—In formulating a plan of treatment a prognosis of the result of that treatment must be clearly in mind. Some advanced tumors give a good prognosis; others at the very beginning are hopeless. Four factors go to make up the prognosis: First, the duration; second, the kind of tumor; third, the accessibility to operation, and fourth, the local topography. (1) The duration gives an important indication of the prognosis in a given class of cancers. As pointed out by Andrews, if a tumor has developed rapidly its subsequent course is likely to be rapid and the prognosis correspondingly bad; and conversely, a tumor which has grown slowly will likely continue to grow slowly—in other words the potential of growth is low and there will be correspondingly slight disposition to recurrence. (2) The kind of tumor may affect the prognosis. If the tumor has little tendency to form metasta-

sis the prognosis is better than of a tumor of the same size and duration which has a disposition to early metastasis. This is seen in cancer of the breast; a rapidly growing colloid cancer gives a better prognosis than many of the smaller, slower growing scirrhus ones. (3) The accessibility to operation plays an important part. In the breast the tumor and its tributary lymphatic tissue are accessible to operative removal and the prognosis is relatively good. Tonsil carcinomas are less accessible and the prognosis is not so good. (4) The local topography. The nature of the tissue about the growth is important. In the stomach, for instance, the area about the disease is less accessible to operative removal than in the breast; but the peritoneum forms a sort of pseudocapsule for the tumor which limits direct extension. The tumors likewise tend more often to adhere to their adenomatous character which lessens the likelihood of metastasis.

*4. The Topographic Anatomy as Applied to the Plan of the Operation.*—The importance of a knowledge of anatomy in the growth and dissemination of malignant disease has already been touched on. Of equal importance is a knowledge of anatomy in the planning of the operation itself. Of first importance is the recognition of the lymphatic anatomy. This is now generally worked out for most regions but our knowledge is yet deficient. Of importance is the proper management of the blood-vessels. It is only in recent years that this subject has received attention. Willy Meyers' high ligation of the vessels in cancer of the breast, and some recent operations applying the same principle to operations in the neck, represent the sum total of the attainments in this direction. The question of skin excision is of importance. Some would, with Halstead, disregard all thought of wound closure; others, as Jackson, would plan the plastic at the beginning of the operation. The latter plan will come more in favor as our knowledge of local extension becomes more perfect. The removal of structures not involved in the growth as a matter of technical convenience is yet unsettled. The pectoral muscles are removed in breast operation while the sternomastoid is left in neck carcinomas. The principle is the same.

*5. The State of the Patient: the Power of Resistance.*—Given the extent of the disease, the extent and character of the operation can be determined. It becomes necessary then to determine if the patient is able to stand the degree of operation necessary to meet the indications. Not alone must the stage and character of the disease be taken into account, but we must consider also the complications brought about by may have on the ability of the patient to with-stand the tumor, or the influence any associated disease



stand the necessary operation. Thus in a patient with a lip cancer involving the lymphatics of both sides of the neck, or one centrally located, the problem presents itself whether the glands on both sides of the neck should be removed at one sitting, or whether one side should be operated on and the other deferred until a later date. The same problem is often met in cancer of the rectum or cecum. If the entire rectum is to be removed transperitoneally the problem appears if the abdominal part of the operation should be done at one sitting and the remainder deferred until a later date. Gastro-enterostomy at one sitting, with pyloric resection at another, may be performed. The decision in such cases depends on the patient's capacity to withstand shock. This depends not alone on the patient's condition but quite as much on the experience and skill of the surgeon. The ability of the patient to withstand operation may be dependent on some associated disease. The presence of an advanced nephritis might determine the question of operation or at least influence its character. In some instances definite rules have been laid down. Thus in the presence of intestinal obstruction demanding immediate operation it is pretty generally agreed that the better procedure is to relieve the obstruction by the establishment of a fistula allowing the resection of the neoplasm to remain for a subsequent operation. Tracheal cancer may present a similar problem.

6. *The Plan of the Operation.*—The danger of dissemination by cutting into the substance of the tissue is now generally recognized. It is less generally admitted that manipulation of the tumor during operation may have the same harmful effect. In order to avoid this the region most remote from the tumor is first excised. Glandular involvements require the same care as the original tumor. It becomes necessary, therefore, to begin with the gland group involved distal to the tumor, or the last affected group. The operation then proceeds toward the tumor. This occludes the lymph vessels and prevents dissemination when it becomes necessary to manipulate the affected parts. This may best be illustrated in the operations for cancer of the lip. In early malignancy before any glandular involvement has occurred the removal of the submaxillary lymph glands together with the growth is sufficient. If these glands are involved the cervical group must be removed first, ascending to the submaxillary and finally the tumor is removed. In many regions this principle cannot be carried out, and in all regions when extensive a group unaffected cannot be reached. In such instances the limit of technical possibility must be decided in each case. The principle remains constant and when it cannot be carried out the prognosis becomes correspondingly bad.

7. *Courage to Do an Operation as Extensive as Needed.*—In many instances the moral courage

of the surgeon is invoked in order to gain permission to do the required operation. In places where cosmetics play a prominent rôle the patient frequently objects to a complete operation. The most frequent example of this is cancer of the lip. Patients possessed of a very small growth easily excised by the removal of a small wedge of tissue, are very apt to object to a radical dissection of the neck. Yet the surgeon is in duty bound to stand on the principle of a complete operation just as he would in case of cancer of the breast. The necessity of this operation is attested by the lamentably bad results after incomplete operations. The removal of a wedge is followed sooner or later by the recurrence in the glands. A secondary operation upon the glands is rarely or never successful. The prominence of the lesion and the possibility of early diagnosis should make the prognosis of lip cancer favorable, but it seems necessary that the principles learned in breast cancer must be learned anew for each region. The patient is incapable of judging the requirements of the operation and the surgeon is in duty bound to do what should be done for the sake of the patient and refuse a lesser operation for the sake of the standing of surgery as a means of curing malignant disease. Operations for malignant disease is major surgery of the highest degree, intellectually, technically and morally.

From the foregoing it appears that a minute knowledge of the surgical anatomy is required in cancer surgery. The pathology of the disease must be understood, not only in general terms but the nature of each tumor *per se* must be appreciated. This requires a broad acquaintance with the biology of tumors. Not only this but the relation of the effect of the tumor upon the general state of the patient and the bearing of the general state of the patient must be comprehended. The technical requirements on the part of the surgeon are of the highest order. In no class of surgery are the resources of the surgeon so often put to the highest test. Often the plan of operation must be changed as the operation progresses. With it all the surgeon must have the courage to insist on doing what is necessary in a given case, or what often calls for even greater courage, the refusal to do a useless operation, for the surgeon in his zeal should not permit the patient, too often the victim of delay, to force upon him the office of public executioner.

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#### NON-SURGICAL TREATMENT OF CANCER \*

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A review of progress in the non-surgical treatment of cancer which would attempt to enumerate all the agents and methods which have been advo-

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ated in the last year or two would not only be impossible within the time allotted to the reading of this report but would be wearying and unprofitable. I prefer, therefore, to essay a broader treatment of the subject with brief details relative to a few procedures which have achieved notoriety if not always success.

It may be profitable at the outset to pause for a moment and scrutinize our mental attitude toward this subject, in order to assure the maintenance of a judicial poise. We read or hear every few days of some new agent which promises to be the long sought cure of cancer, or which has at least yielded astonishing results. These reports often emanate from men who are not only capable but honest. Sometimes even they bear names which inspire respect throughout the medical world. And yet within a few months doubt deepens into the certainty of one failure more. This phenomenon, namely, the uttering of misleading statements by intelligent and presumably upright men, is interesting as a psychologic problem and worthy of our investigation, as there is some danger of its eventually breeding an unfortunate nihilism or agnosticism even among so credulous a body as the medical profession. Professor Reclus<sup>1</sup> seeks to explain the matter as follows: "At first it seems difficult to explain how men of science could have allowed themselves to be enticed by these deceptive discoveries and to publish some ephemeral successes. But it must not be forgotten that those affected with cancer are patients treated without much conviction and frequently abandoned to morphia. Suddenly a savior appears and communicates his confidence. Hope revives with the desire to live, sleep returns, appetite and strength increase, and both patient and surgeon are carried away by enthusiasm and end by proclaiming as incontestable imaginary cures." Another factor here involved lies in the mistaken interpretation of certain processes actually occurring in cancer. Attention has been called to these by Handley in his Hunterian lecture on "The Natural Cure of Cancer."<sup>2</sup>

"The natural history of cancer, in accordance with the permeation theory of dissemination, is one of centrifugal growth followed by centrifugal death. The process of perilymphatic fibrosis which destroys a permeated lymphatic and leaves only a fibrous cord to represent it, is paralleled on a large scale by similar fibrotic processes which start in the center of the macroscopic nodules and spread slowly to their circumference. But at the periphery the growing edge of permeation continues to advance and to produce fresh satellite nodules which ultimately cause the death of the patient. Thus the natural cure of cancer is always

going on, but since it is a local, not a constitutional process, it is accompanied by further active spread of the disease in other regions farther removed from the primary focus. The early hope and the ultimate disappointment associated with cancer remedies thus find an explanation. It may be stated as a law of cancerous growth hitherto unrecognized that:

"Every aggregation of cancer cells has a definite life-cycle, and after increasing in size for a definite period and at a varying rate, tends spontaneously to undergo degenerative and fibrotic changes. These changes extend from the center of the mass centrifugally to its periphery, lead to its shrinkage and terminate in the replacement of the aggregation of cancer cells by a fibrous scar."

This is illustrated on a large scale in certain cases of lenticular carcinoma in which central nodules disappear while new ones develop farther away. "The disappearance of existing nodules, as distinguished from the failure of fresh ones to appear, is of no value as determining a therapeutic test." These phenomena, Handley believes, sufficiently account for the favorable but always temporary results which have been so frequently recorded in the medicinal and physical therapeutics of cancer.

Let us now briefly review some of the more recent or less known therapeutic methods. Such agents as the x-ray, freezing and Coley's fluid are too trite for more than mention.

*Radium.*—Much work has been done with this substance, especially by Wickham and Degrais.<sup>3</sup> By the use of relatively simple apparatus therapeutic effects can be directed: 1. To the surface alone, causing violent irritation and destruction. 2. To the surface of the tissues alone without causing any irritation or destruction. 3. To a depth, without irritating the surface or destruction. 4. To a depth, destroying the surface as well as the deeper parts. 5. To the surface and at a depth simultaneously, with a strength about the same throughout, and without any destruction of tissue.

The destructive action of radium employed with therapeutic object is well known, for when radium was first introduced this action alone was utilized. It is interesting therefore to note that Dr. Wickham tries to avoid the destructive action and to limit it in the cases in which this destruction is necessary.

Dr. Wickham encloses the radium in lead screens, to shut off the harmful effects of the less penetrating rays which are apt to injure the skin. The superiority of radium to x-rays in the treatment of cancer has not yet been proved, and

1. Reclus: Presse méd., March 18, 1908.

2. Handley: Brit. Med. Jour., March 6, 1909.

3. Wickham and Degrais: Brit. Med. Jour., March 6, March 27, April 10, 1909.



neither method can yet be recommended as a substitute for operation save in rare and exceptional cases and in rodent ulcer. The claims which Wickham<sup>4</sup> makes for radium are as follows:

1. The treatment can be applied without inconvenience to the patient in his or her daily occupation. 2. The interposition of lead screens renders the action of the rays on tumors slow, and on healthy tissue harmless. 3. "Cross-fire" application compensates for the great diminution in radiations, caused by lead filtration. (By "cross-fire" is meant the use of two screens, charged with radium, placed at opposite sides of the region treated.) 4. The radiations exert their special action at a depth. As regards cancer of the breast, radium can (a) cause its retrogression to such a degree as to bring about the appearance of a cure; (b) transform an inoperable into an operable cancer; (c) act on recurrences of small dimensions following on operations; (d) act on some cancerous lymphatic glands if not too extensively involved; (e) prolong life in incurable cases by relief of pain, and check hemorrhage and cancerous discharges, and (f) act as a prophylactic against recurrence after surgical intervention.

On a later occasion Wickham<sup>5</sup> stated that radium does not in the majority of cases effect more than an amelioration and that it cannot be said that it cures cancer. Its indications and its limitations are almost identical with those of the x-ray.

There is a possibility that radium emanation<sup>6</sup> may be useful in cases of inoperable cancer which cannot be reached by radium applied from the outside. Injections were made with water that had been subjected to the emanations for ten days.

*Fulguration*, which is an application of high-frequency currents of enormous power, has, on the whole, proved a failure. It possesses a destructive action, and like all destroying agents can at times produce an apparent cure. The consensus of the best opinion seems to be that the x-ray is equally valuable and more pleasant to both patient and operator.

*Ionization* of zinc and mercury<sup>7</sup> has yielded some good results. According to Massey the fundamental facts are that by utilizing the ionic action of the positive pole, "a quantity of zinc and mercury ions may be interstitially diffused throughout a malignant growth in a few minutes, sufficient to kill all malignant cells and their accompanying germs."

*Thymus Gland*<sup>8</sup> is said to have yielded prompt and continuous improvement in many cases of severe cancer which had failed of improvement with other methods.\*

Gellhorn's acetone treatment is worthy of being mentioned in this brief summary, although by this time well known to most of you.

The present it will be seen has little to offer in the non-surgical treatment of cancer. May we hope for more from the future?

In what direction does it seem most useful, in the dim light of our present knowledge, to seek for therapeutic advances? Shall we look for some new antiparasitic agent? Whatever hope once lay in this direction has well nigh faded. While we cannot here take up a discussion of the etiology of cancer, it may safely be said that the adherents of the parasitic theory are growing each year fewer, and even these visibly wavering in their faith. Much more consonant with observed facts is the endogenetic or biologic doctrine according to which cancer is parasitic only in the sense that the cancer cell is itself a parasite on the economy.

May we hope for an agent possessing a selective poisonous action on the cancer cell analogous to the "parasitotropism" of salvarsan? The difficulty in the way of such an achievement lies, as Handley puts it, "in the close affinity which appears to exist between a cancer cell and the normal epithelial cell, since the discovery of a selective poison for cancerous epithelium is thereby rendered most unlikely."

On the other hand, therapeutic progress in cancer is most likely to be made by a study of the natural defences of the body against it. The rare but thoroughly well authenticated cases of spontaneous cure prove that this hope has a foundation in reality.<sup>9, 10</sup>

While we know of nothing in the last mentioned direction that is now available for therapeutic purposes, certain recent experimental investigations suggest that something of the sort may yet be found. I shall briefly refer to some of these, for since there is so little in the way of present help, one is impelled to seek at least for grounds of reasonable hope.

After Harrison had grown tissues of frog embryo *in vitro*, Carrel and Burrows<sup>11</sup> did the same with mammalian tissues, human and fowl sarcoma, and showed that while sarcoma cultivated in the blood plasma of the individual bearing the tumor grew very extensively, that on the other hand the plasma of a sarcomatous animal acquires the property of inhibiting the growth of a sarcoma taken from another animal. Further experiment showed that the inhibiting power of sarcomatous plasma is not due to substances secreted by the tumor, and may possibly be due to substances produced by the host as a reaction against the tumor. It is important to remember that the inhibiting power of the sarcomatous plasma is felt only by a tumor belonging to

4. Wickham: *Lancet*, London, May 29, 1909.

5. Wickham: *Brit. Med. Jour.*, Sept. 17, 1910.

6. Brunton and Glover: *Lancet*, London, Feb. 12, 1910.

7. *Jour. A. M. A.*, Sept. 12, 1908; March 25, 1911.

8. Gwyer: *New York Med. Jour.*, Feb. 19, 1910.

9. Wells: *Jour. A. M. A.*, May 29, 1909.

10. Clark: *Clinical Jour.*, Feb. 6, 1907.

11. Carrel and Burrows: *Jour. A. M. A.*, Oct. 15, 1910, p. 1379; Oct. 29, 1910, p. 1554; Dec. 10, 1910, p. 2057.

another animal, and not by a tumor belonging to the animal from which the plasma was taken. "If a tumor could be sensitized to the action of the inhibiting substances existing in the plasma of the organism on which it grows, its development in the same plasma would probably be prevented."<sup>12</sup>

Wherein the "inhibiting power" of sarcomatous plasma consists is not known. Specific antibodies have never been demonstrated in the blood-serum of animals immune to cancer.<sup>13</sup>

According to Russell<sup>14</sup> inoculated cancer tissue fails to grow in immune mice because of the absence of a specific stroma reaction on the part of the host, and not because of the presence of cytotoxic or cytolytic substances. That is, in immune animals the implanted cells lose their power of calling forth a stroma reaction.

While the matter of prophylaxis perhaps lies beyond the scope of this report, it is clearly far more important than the treatment of existing disease. Progress in prevention may be expected:

1. From a better knowledge of predisposing local causes.

2. From a better knowledge of preceding or accompanying tissue changes. Victor Bonney<sup>15</sup> has pointed out an important lead of this sort. He finds that the onset of a carcinoma is constantly preceded by certain chronic inflammatory changes in the underlying connective tissues and by epithelial hypertrophy. The principal connective tissue changes consist in increased cellularity, in the advent of numbers of plasma cells to the affected area, and to the disappearance of its elastic tissue. The down-growth of the epithelial cells appears thereby to be facilitated.

3. There is at least a possibility of the discovery of some method of immunization applicable to human beings. Ehrlich<sup>16</sup> realized it in mouse cancer in his "Atreptic Immunity." He considered the cancer cell as though it were a bacterium and applied methods taken from bacteriology. He found that inoculation of a mouse with non-virulent carcinoma often protects it against a later inoculation with a virulent carcinoma. That such immunity need not depend on artificial means was shown by Bashford, Murray and Cramer,<sup>17</sup> who found that mice in which a growing tumor has been spontaneously absorbed may be completely protected against subsequent inoculation of the same growth, and to a lesser extent against other and different growths.

May we not hope that from investigations of this sort will, at last, come man's victory over this cruel and ancient foe?

## A DIFFERENTIAL STUDY OF MULTIPLE BENIGN CYSTIC EPITHELIOMA AND ADENOMA SEBACEUM IN THE NEGRO

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The clinical and pathologic resemblances existing between the three principal multiple, non-malignant cutaneous neoplasms, benign cystic epithelioma, adenoma sebaceum and lymphangioma tuberosum multiplex, has long been a subject of contention among medical men. Pick<sup>1</sup> has suggested that the first two are but different



Multiple benign cystic epithelioma, showing distribution of lesions.

clinical expressions of the same pathologic process, but, while the resemblance in a border line example of each may be quite striking, the microscopic changes observed in representative cases of the two disorders are so dissimilar that his position is hardly tenable.

According to Unna,<sup>2</sup> Balzer and Menetrier<sup>3</sup> were the first ones to study the minute anatomy of multiple benign cystic epithelioma, although they failed to recognize the true nature of the

12. Jour. A. M. A., Jan. 17, 1911, p. 32.  
13. Lambert and Hanes: Jour. A. M. A., Feb. 25, 1911, p. 587.

14. Russell: Third Scientific Report of Imperial Cancer Research Fund, 1908.

15. Bonney: Lancet, London, May, 1908.

16. Ehrlich: München. med. Wchnschr., Oct. 9, 1906.

17. Cramer: Third Scientific Report of Imperial Cancer Research Fund, p. 315.

\* Read in General Session, Missouri State Medical Association, Kansas City, May 18, 1911.

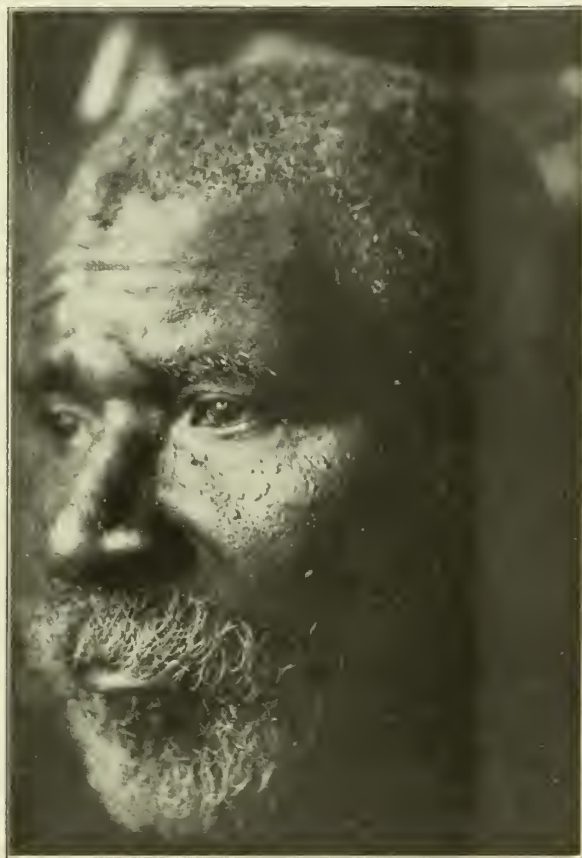
1. Pick: Arch. f. Derm. u. Syph., lviii, p. 201.

2. Unna: Histopathology of Diseases of the Skin. Walker's translation. Clay, Edinburgh, 1896, p. 1124.

3. Balzer and Menetrier: Arch. f. Physiol., 1885, p. 565.



tumor, and considered it a neoplasm of the sebaceous glands. Their patient was a woman, aged 21, whose mother had suffered from a similar affection. The growths appeared at puberty, as small pin-head to pea-sized nodules on the forehead and later on the face, scalp, neck and ears. Microscopically they consisted of epithelial masses scattered through the connective tissue of the cutis, and containing cysts in their interior. These cysts were very numerous, sometimes thirty or more in one section, and while the authors considered the enclosed material as a transformation "en éléments sébacés." Unna has pointed out that it was composed mostly of hyalin and colloid fragments.



Adenoma Sebaceum, showing distribution of lesions.

All the epithelial nests were sheathed in capsules of connective tissue, and the greater number of them contained no fat whatever, but only flattened, horny lamella.

Brooke<sup>4</sup> and Fordyce,<sup>5</sup> working independently, were the next to investigate thoroughly the histology of the lesions (both Török's<sup>6</sup> and Jacquet and Darier's<sup>7</sup> cases were undoubtedly examples of lymphangioma tuberosum multiplex).

4. Brooke: Brit. Jour. Derm., 1892, p. 269.

5. Fordyce: Jour. Cut. Dis., 1892, p. 459.

6. Török: Monatschr. f. prakt. Derm., viii, p. 116.

7. Jacquet and Darier: Ann. de dermat. et de syph., 1887, p. 317.

Brooke's conclusions were based on a study of four cases of the disease (two histologically), three of the patients being members of the same family. He traced the origin of the growths from the epidermal epithelium (rete Malpighii and hair follicles). Fordyce's two cases were seen in a mother and her daughter. The lesions first appeared on the mother when she was 15 years old, and on the daughter at the age of 13. In both instances the growths were translucent and pearly looking, and varied in size from a pin head to a split pea, and in both patients the face, neck and chest were attacked. The larger growths were covered with small capillaries, and intermingling with the lesion telangiectases and black pigment spots were found.

Sections from the first tumors examined failed to show any connection between a new growth which was present in the cutis and the epidermal or glandular appendages. When other tumors in which a central depression was macroscopically visible were studied, however, there was found a direct down-growth and proliferation of the epidermis and also of the external root sheath of the hair follicle.

The proliferated basal layer of the epidermis could be seen forming the peripherally situated cells of the masses and retaining the same palisade arrangement of the cells as in normal epidermis.

The resulting cell heaps in many sections approached the hair follicles so closely that the hair was deflected from its normal course. Numerous sebaceous glands were observed throughout the sections, but in every respect these were quite normal and independent of the cell masses resulting from epidermal proliferation. Unaffected coil glands and ducts were found in some of the specimens, but in lesser number than usual.

J. C. White's<sup>8</sup> patient was a woman aged 45, and the disease had been present twenty-one years. The lesions, which varied in size from the head of a large pin to a quarter of a dollar, were distributed over the face, neck, shoulders and forearms.

Some of the tumors had undergone further changes and became malignant. Histologically Bowen found compact masses of epithelial cells in the corium, somewhat resembling the ducts of the coil glands. On close examination, however, it was found that these islands and strands of epithelial cells were connected and intermingled in a very complicated manner, and small cysts containing a granular or homogeneous substance, with one or two large, deeply staining cells were frequently seen. A few of the cysts contained a corneous substance in place of, or together with, the colloid material. In all of the tumors a connection of the epithelial masses and tracts with the lower cells of the rete could be demonstrated.

8. White. Jour. Cut. Dis., 1894, p. 477.

In Jarisch's<sup>9</sup> case also there were manifestations of malignancy, the process starting in the outer layers of the hair follicles, and this writer suggested for the condition the name "tricoepithelioma papillosum multiplex."

Stelwagon's<sup>10</sup> case which is the third one of multiple benign cystic epithelioma in which the tumors have exhibited cancerous tendencies, was in an adult male, and the lesions were distributed over the face and forehead. Some of the larger tumors, as in the cases of White and Jarisch, showed signs of malignancy similar to those observed in rodent ulcer. In fact, Adamson<sup>11</sup> is inclined to the belief that these three instances are closer to the rare examples of multiple rodent ulcer than to the Brooke-Fordyce type of multiple benign cystic epithelioma. Within the past ten years Wolter,<sup>12</sup> W. Pick,<sup>13</sup> Hartzell,<sup>14</sup> Csillag,<sup>15</sup> Kreibach,<sup>16</sup> Charles J. White,<sup>17</sup> Pusey,<sup>18</sup> Heidingsfeld,<sup>19</sup> and others have reported cases or discussed the pathology of the condition. Wolter's patient was a woman, aged 20, with a solitary lesion, which had been present since birth, on the right eyebrow. The corium contained large numbers of rows of epithelial cells, from one to four deep, presenting here and there dilations in their course.

When traced out it was found that these cellular structures were connected directly or indirectly with the hair follicles or glands. The dilations consisted of concentric rings of these epidermal cells, the centers of which had either undergone colloidal degeneration or still contained a horny pearl of cornified epidermis. In Wolter's opinion the character and formation of the structures were conclusive evidence of their epithelial origin.

Pick's case occurred in a man of 43, and the disease had been present since the patient was about 8 years old. The growths were on the malar regions and the forehead. There was some dilatation of the superficial capillaries, as in Fordyce's cases. The principal histologic changes were observed at the periphery of the sebaceous follicles, and consisted of marked proliferation of the epithelium with tumor formation.

In some respects this increase of tissue elements was suggestive of an adenoma. It showed no definite malignant tendency.

Hartzell's first two patients were both females, one aged 80 and the other 38 years. The older woman presented a rounded patch of small, firm, translucent, bluish-white nodules, many of which

were confluent, on the right side of the forehead. Near the outer of the patch was a superficial ulcer. The growth had been present six or seven years. The second patient had a half dozen dime to half dollar-sized, oval and irregularly shaped patches on the subelavicular and scapular regions.

The lesions consisted of a bead-like border of pin-head to split-pea sized papules, surrounding an area of cicatrized and atrophied skin.

Histologically, both cases closely resembled those previously described by Brooke and Fordyce.

In Hartzell's second communication, which is based on the study of a third case of the disease, he concludes that Darier, Jacquet and Török, Unna<sup>20</sup> and Neumann<sup>21</sup> are wrong in concluding that lymphangioma tuberosum multiplex (Kaposi) arises from the excretory ducts of the coil glands, and expresses the belief that this neoplasm is simply a variety of multiple benign cystic epithelioma. Hartzell's third patient was a girl, aged 14, and the solitary lesion present, which was a small, firm, button-like, yellowish-pink tumor on the chin, had first been noticed four years previously. Microscopically, there were numerous slender tracts of cylindrical epithelial cells, usually two or three cells wide, running in all directions through a fibrous stroma, and many oval cysts with epithelial walls, filled with hyaline material which usually showed a more or less laminated arrangement. No connection with any part of the sweat gland apparatus could be demonstrated. Frequently long, slender epithelial branches could be seen extending from a hair follicle, more often from its upper third, and in a few instances the lower extremity of the follicle presented numerous budding processes. Many of the follicles contained cystic cavities in various stages of development, in most of which the hairs were still present. In other words, the neoplasm was identical in structure with those described as syringocystoma (Török and Philipson), hydradenoma (Darier and Jacquet), and hemangio-endothelioma (Jarisch<sup>22</sup>), while apparently the evidence was equally clear that it was an epithelial growth springing from the hair follicles, and in no way connected with the coil glands or ducts, or the blood-vessels.

Csillag's two cases were seen in a mother and daughter, and the regions affected were the scalp, nose and various parts of the face. Histologically, there were solid processes of epithelial cells, growing from the surface epidermis or from the prickle cell layer of the hair follicle, surrounded by a regular basal layer which was continuous with that of the structure from which the growth originated. Some of the processes were club shaped, while others were almost circumscribed masses with cyst-like formations in the central portion.

20. Darier et al.: Histopathology of Diseases of the Skin, 1896, p. 1124.

21. Neumann: Arch. f. Dermat. u. Syph., 1900, p. 3.

22. Jarisch: Idem, xxviii, 164.

9. Jarisch: Arch. f. Dermat. u. Syph., 1897, p. 164.

10. Stelwagon: Diseases of the Skin, 1910, p. 634.

11. Adamson: Lancet, London, Oct. 17, 1908.

12. Wolter: Arch. f. Dermat. u. Syph., 1901, pp. 89 and 197.

13. Pick: Idem, 1901, p. 201.

14. Hartzell: Am. Jour. Med. Sc., September, 1902; Brit. Jour. Derm., 1904, p. 361.

15. Csillag: Arch. f. Dermat. u. Syph., 1906, p. 163.

16. Kreibach: Idem, 1904, p. 3.

17. White: Jour. Cut. Dis., 1907, p. 50.

18. Pusey: Principles and Practice of Dermatology, 1907, p. 863.

19. Heidingsfeld: Jour. Cut. Dis., 1908, p. 18.



Kreibach's case, which was seen in a woman of 23 years, was probably an anomalous type of this disease, although he preferred to call it "adenoma folliculare cutis papilliformum." The growths were seated on the back of the neck, on the right shoulder and suprascapular region, and over the spinal column in the interscapular space. Microscopically, the neoplasms contained numerous cysts, which were frequently, but not always, connected with the pilosebaceous apparatus. There were some cell masses which were grouped like those seen in the coil glands, but none of the cysts were connected with the sweat ducts. Charles J. White,<sup>17</sup> in reporting a case of syringocystoma, (lymphangioma tuberosum multiplex), discusses in detail the clinical and pathologic findings in this disease and in multiple benign cystic epithelioma, and, in view of the general consensus of opinion regarding the individual identities of the two disorders, pleads for their separate classification in dermatologic literature.

Pusey's patients were a father and daughter. Heidingsfeld's<sup>19</sup> article on multiple benign cystic epithelioma was based on the study of six cases of the disorder, five of the patients (a father, two daughters and two sons) being members of the same family.

All of the sections showed characteristic interlacing epithelial strands and colloid cysts.

Rayer<sup>23</sup> was the first to describe the disease which we now recognize as adenoma sebaceum. He called the small tumors "végétations vasculaires," however, principally because of the telangiectatic condition that usually is associated with the affection.

Addison and Gull<sup>24</sup> also reported examples of the disorder, which they considered a lichen.

Pringle<sup>25</sup> was the first to accurately describe the histology of the lesions, and the "Pringle type," of adenoma sebaceum is as familiar to dermatologists as the "Brooke-Fordyce" type of multiple benign cystic epithelioma.

The lesions vary in size from a pin head to a split pea, never coalesce, and are usually symmetrically distributed on the nose, cheeks, and labial furrows. Their color is yellowish or pinkish, and there is generally a dilated condition of the superficial capillaries in the affected region. The growths are benign, and usually appear in early childhood or at puberty, and persist indefinitely.

Persons of defective mental development are more frequently attacked than those of normal intelligence. Heredity has been noted only once.

Pathologically "the lesions consist of a new formation of sebaceous glands, more or less modified, but always recognizable."<sup>26</sup>

Poor<sup>27</sup> would place in a separate class those cases of adenoma sebaceum that do not clinically correspond to the Pringle type. The principal differences observed in these anomalous examples are their asymmetrical distribution, the fact that they are congenital or appear very early in life, and their tendency to coalescence. In this group he would place the cases of Jamieson,<sup>28</sup> Bandler and Jadassohn,<sup>29</sup> Pollitzer<sup>30</sup> and Csillag.<sup>31</sup> Krzyształowicz<sup>31</sup> would divide the disorder into two pathologic varieties, one a true hypertrophy of the sebaceous glands which may undergo degeneration, and a second which seems to include several pathologic deviations.

The disorder is seen more frequently in males than in females; in a review of the literature I find twenty-eight cases occurring in the former and seventeen in the latter. It is commoner in England than in any other country as the reports of Anderson,<sup>32</sup> Jamieson,<sup>33</sup> Dockrell,<sup>34</sup> Perry,<sup>35</sup> Somers,<sup>36</sup> Savill,<sup>37</sup> Brummond,<sup>38</sup> Thompson,<sup>39</sup> Dore,<sup>40</sup> MacLeod,<sup>41</sup> W. Fox,<sup>42</sup> and others amply demonstrate.

While only a few instances of the disease have been recorded by German writers, the cases have been thoroughly worked up, and almost every investigator has suggested a new name for the affection. Rosenthal,<sup>43</sup> Marullo,<sup>44</sup> Kothe,<sup>45</sup> Pick, Poor, Csillag and Buschke,<sup>46</sup> among others, have contributed to our knowledge of the malady. In America, Pollitzer<sup>30</sup> was the first to call attention to the disease. His patient was a man, aged 19. The growths were confined to a small, oblong area on the left side of the forehead, and had been present six or seven years. Histologically their structure was not that of a typical lesion of adenoma sebaceum, although the greater portion of the tumors was made up of sebaceous glands and ducts.

G. H. Fox<sup>47</sup> has reported three instances of the affection, all occurring in girls and young women.

Gotthell<sup>48</sup> has described an example, in a girl of 19, the lesions being entirely confined to the scalp.

Recently, I have had an opportunity to study a case of multiple benign cystic epithelioma and also one of adenoma sebaceum, both in full-

27. Poor: *Monatschr. f. prakt. Derm.*, 1905, p. 370.

28. Jamieson: *Brit. Jour. Derm.*, 1901, p. 379.

29. Bandler and Jadassohn: *Arch. f. Dermat. u. Syph.*,

lvii, p. 176.

30. Pollitzer: *Jour. Cut. Dis.*, 1893, p. 475.

31. Krzyształowicz: *Monatschr. f. prakt. Derm.*, 1907,

p. 1; cited by Stelwagon, loc. cit.

32. Anderson: *Brit. Jour. Derm.*, 1895, p. 316.

33. Jamieson: *Brit. Jour. Derm.*, 1893, p. 138.

34. Dockrell: *Brit. Jour. Derm.*, 1895, p. 340.

35. Perry: *Brit. Jour. Derm.*, p. 99.

36. Somers: *Brit. Jour. Derm.*, 1896, p. 232.

37. Savill: *Brit. Jour. Derm.*, p. 24.

38. Brummond: *Brit. Jour. Derm.*, 1901, p. 187.

39. Thompson: *Brit. Jour. Derm.*, p. 275.

40. Dore: *Brit. Jour. Derm.*, 1906, p. 215.

41. MacLeod: *Brit. Jour. Derm.*, 1906, p. 218.

42. Fox: *Brit. Jour. Derm.*, 1906, p. 283.

43. Rosenthal: *Monatschr. f. prakt. Derm.*, 1894, p. 88.

44. Marullo: *Dermat. Ztschr.*, ix, 166.

45. Kothe: *Arch. f. Dermat. u. Syph.*, 1904, p. 33.

46. Pick et al.: *Dermat. Ztschr.*, xi, p. 467.

47. Fox: *Jour. Cut. Dis.*, 1897, p. 88; *Trans. Am. Dermat. Assn.*, 1898.

48. Gotthell: *Jour. Am. Med. Assn.*, 1901, p. 176.

23. Rayer: *Treatise*; second edition; Willis' translation, p. 996.

24. Addison and Gull: *Guy's Hosp. Reports*, Ser. II, vii, p. 267.

25. Pringle: *Brit. Jour. Derm.*, 1890, p. 1.

26. Audry: *Ann. de dermat. et de syph.*, 1903, p. 563.

blooded negroes. So far as I can find neither of these diseases has ever before been noted in the colored race, although Heidingsfeld<sup>10</sup> has recorded the occurrence of lymphangioma tuberosum multiplex in a negro man.

Patient, J. B., female, married, housewife, aged about 66 years.

**Family History:** The cutaneous history of the family is so very remarkable that I was at first exceedingly doubtful concerning its accuracy. After closely questioning the patient on several different occasions, however, and then interviewing five other members of the family who live in a neighboring city, I am convinced that the information given can be relied upon.

To the patient's personal knowledge the following relatives have had lesions on their faces similar to those on her own: Her mother. Three of her mother's sisters. All her own sisters (9). All her own brothers (2). All her own children (8 girls and 6 boys). All her eldest sister's children (11 girls and 6 boys). All the next older sister's children (2 girls and 5 boys). All the next older sister's children (5 girls and 3 boys). Five of her sisters died in childhood (aged from 4 to 13 years). All her eldest brother's children (1 girl and 1 boy). All her youngest brother's children (3 girls and 1 boy). In every instance the growths appeared in early baby- or childhood, and persisted all through life. So far as the patient knows, none ever became malignant.

Among the patient's people the "marks" are considered rather a distinguishing feature and they are very proud of the little neoplasms. I superficially examined three of the daughters and two of the sons. All had growths on their faces apparently similar in every respect to those seen on the mother. They would not permit the excision of the tumors under any circumstances, however, and the small amount of material obtained was secured with great difficulty.

**Personal History:** The patient is a native of Alabama, but has resided in Kansas (first on a farm near Fort Scott, and later in Kansas City) for the past thirty-nine years. Her general health has always been good, although she has at various times suffered from rheumatism, and from eczema of the hands. It was for treatment for the latter ailment that she was admitted to my service in the University Medical College Dispensary, in October, 1909.

**Present Illness:** The tiny growths on the patient's face have been present ever since early babyhood. They have never given rise to subjective symptoms, and none have ever ulcerated or broken down.

**Examination:** The patient is a brownish-black negro, with rather a straight nose, and lips of medium thickness. She is exceptionally intelligent for a colored woman. There is present a seborrhœic dermatitis of the scalp, and a considerable area of alopecia pityroides in the frontal region.

The growths, which vary in size from the head of a pin to the tip of a navy bean, are darker than the normal skin and are distributed over the face, forehead, and malar regions.

There are forty-nine of the lesions in all, and the smaller ones resemble tiny pigmented moles more than anything else. There is no tenderness on pressure, and, although some of the tumors present a slight central depression, nothing can be squeezed out of them. On puncturing the lesions, however, and again applying pressure, a little blood and serum exudes (as in Dyer's case (New Orleans Med. and Surg. Jour., Vol. 1, p. 530)).

Following the administration of pilocarpin, sufficient in amount to cause profuse sweating, the tops of the tumors are perfectly dry.

**Histopathology:** Two of the nodules were excised for laboratory purposes, a large one from the right cheek, near the nose, and a small one from the left malar region. The bits of tissue were hardened in alcohol and mounted in celloidin. For staining purposes, hematoxylin-eosin, methylin blue, and Weigert's solution were employed.

A number of serial sections were made. The smaller lesion showed only a thickening, with increased pigmentation of the epidermis, the cutis contained nothing abnormal. No coil or sebaceous glands were present. Sections of the larger tumor, however, showed a very interesting histological picture.

An imperfectly developed hair follicle extended downward near the center of the growth. From the outer root sheath of the follicle, finger-like projections of epidermal cells had pushed out into the connective tissue of the skin, and in the central portion of these masses were rounded or oval accumulations of cornified epithelial cells. The sebaceous glands were decreased in size and number, but were normal. No coil glands were to be found.

A long, slender chain of epidermal cells, from three to five cells in width, was found extending for some distance into the cutis and a point near the margin of the neoplasm. A few mm. below the surface the epithelial strands encircled a small collection of hyaline substance and, still further down, at a point where the projection ended in a club-like mass of irregularly arranged cells, a second ball-shaped collection of poorly stained epithelial fragments and colloid material was found.

A diagnosis of multiple benign cystic epithelioma was made, which was later verified by Dr. Charles J. White, of Boston, who was kind enough to write me regarding the sections, some of which were presented to him. Dr. White suggested that the growth was more nearly a tricho-epithelioma than a typical representative of the Brooke-Fordyce type.

Patient: F. R., male, married, laborer, aged about 55 years.

**Family History:** The cutaneous history of the family is negative.

**Personal History:** The patient is a native of Georgia, and a resident of this city. His general health has always been good, with the exception of an occasional attack of lumbago. It was for the relief of this ailment that he came to the University Medical College Dispensary, in January, 1911, and I am indebted to one of the senior students, Mr. U. G. McElvain, who became interested in the eruption on the patient's face, and brought the case to me for examination and diagnosis.

**Present Illness:** The patient first noticed the lesions when he was about fifteen years of age. He thinks no new ones have appeared since his twenty-first birthday. None of the growths have ever coalesced, and no subjective symptoms have been present at any time.

**Examination:** The patient is a coal-black man, with thick lips, and short, kinky hair. Mentally, he is below the average, even for a negro. He speaks slowly and haltingly, and at times appears to be in a sort of stupor.

Scattered over the trunk and thighs are numbers of pendulous fibromata, the majority of which are about the size of a split pea.

Distributed symmetrically over the nose and the flush areas of the cheeks are numerous small, smooth, firm, black tumors, varying in size from the head of a small pin to the tip of a slate pencil. There are sixty-eight of these lesions in all, and none shows signs of degeneration or ulceration.

The hair is thick and healthy looking, and there is no evidence of seborrhœic dermatitis.



The tumors are confined almost entirely to the sides of the nose, and to the adjoining areas on the cheeks lying between the nasio-labial folds and the margins of the lower lids. The tops of the larger growths are smooth, and shining, but in some of the smaller ones a slight central depression is visible, and a comedo-like mass can be squeezed out, otherwise the condition bears a very close clinical resemblance to the case of multiple benign cystic epithelioma just described. A few telangiectases are present.

Histopathology: Two of the neoplasms, one from either cheek, were excised for microscopic examination. Each of the nodules was cut in two, and the portions fixed and hardened in alcohol and in 4 per cent. aqueous solution of formalin, respectively. For staining purposes, methylene blue, hematoxylin-eosin, Weigert's solution, and scarlet R, with hematoxylin as a counterstain, were employed.

The smaller growth was made up of two imperfectly formed (and empty) hair follicles, with subjoined masses of enormously hypertrophied sebaceous glands, the largest of which communicated directly with the surface. The cells and nuclei stained clearly and well. Two of the larger masses of glandular tissue were divided into separate lobules by fine, fibrous septa, somewhat resembling those seen in Böck's (Virchow's Arch., lxxxi, p. 503) case, but fatty degeneration was noted in only one of the cell collections, a small, oval mass which was situated some distance from the main body, and no concretions were found.

Histologically, the other tumor was less typical of the Pringle type, although it more nearly fulfilled Unna's<sup>2</sup> definition of a true steatadenoma ("a benign tumor-like growth of irregular formation proceeding from the epithelium of the sebaceous glands, in the out-growths of which fatty, but no colloid metamorphosis takes place"). Surrounding the lower third of an abortive hair follicle were numerous small, oval, or irregularly oval, collections of sebaceous glands. No horny pearls or colloid material were found, although portions of the glandular substance had in some instances so softened as to become almost homogenous and practically lose its epithelial identity. The inter-acinal septa were much thicker, and the connective tissue more dense than in the smaller growth, and the elastic tissue was greatly decreased in amount, probably a result of pressure atrophy.

The individual cells in the sebaceous masses were smaller and less plump than those observed in sections of the first tumor, and the number of lobules was increased fully three-fold, as compared with the glandular appendages of a normal hair in this region.

Conclusions: The findings in the example of multiple benign cystic epithelioma here reported would serve to differentiate it from any case of lymphangioma tuberosum multiplex that has yet been recorded.

It more nearly resembles the type first described by Jarisch than any other, although some features noted in his case are absent in this one, while some of those seen in a typical instance of the Brooke-Fordyce type of the disease are present.

The histopathology of the lesions certainly tends to emphasize the fact that these little growths may vary greatly in form and structure, and yet retain the essential characteristics that enable us to include them in a fairly well defined class of their own, and, incidentally, it also serves to prove the futility of the endeavors of some investigators to separate, because of a few minor anatomic differences, a more or less typical example of the disease from the main group in an

effort to prove the existence of a new clinical or pathologic entity.

In the second case the smaller growth shows simply the presence of a circumscribed hypertrophy of the sebaceous glands and not a true adenoma.

The larger neoplasm, however, I believe to be a tumor which practically fulfils Unna's definition of a steatadenoma, although it probably is wiser in the present state of our knowledge, to include both under the broad designation of adenoma sebaceum.

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TO CALL the movement for better factory conditions "the humanizing of industry" implies that modern industry not influenced by that movement is brutalized. The brutalizing of industry was due chiefly to a general ignorance of health laws—an ignorance that registers itself clearly and promptly in factory and mine. It is not that a man is expected to do too much, but that too little is expected of the human body. The present recognition of the body's right to vitality is not because the employer's heart is growing warmer, or because competition is less vicious, but because the precepts of hygiene are found to be practical. Where better ventilation used to mean more windows and repair bills, it now means greater output. Where formerly a comfortable place in which to eat lunch meant giving up a workroom and its profits, it now means 25 per cent. more work done in all workrooms during the afternoon. The general enlightenment as to industrial hygiene has been accelerated by the awakening that always follows industrial catastrophes, by the special crusade against tuberculosis, and by compulsory notification and treatment of communicable diseases.—*Civics and Health.*

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CATASTROPHES have dominated the vocabulary that describes factory "welfare work." Because accidents such as gas in mines, fire in factories, fever in towns, and epidemics of disease incident to certain trades were beyond the power of the workers themselves to control or prevent, wage earners have come to be looked on as helpless victims of the cupidity and inhumanity of their employers. This attitude has weakened the usefulness of many bodies organized to promote industrial hygiene. Although the term "industrial hygiene" is broad enough to include all sanitary and hygienic conditions that surround the workers while at work, it is restricted by some to the efforts made by altruistic or far-sighted employers in the interest of employees; others think of prohibitions and mandates in the name of the state that either prevent certain evils or compel certain benefits; for too few it refers to what the wage earner does for himself.—*Civics and Health.*

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

DECEMBER, 1911

### EDITORIALS

#### FEE-SPLITTING

It is high time that the organized profession gave serious consideration to the meretricious evil known as fee-splitting, where one physician refers a patient to another doctor and for that favor receives a percentage of the fee from the man who actually serves the case.

This evil thing is utterly abhorrent to the upright physician and absolutely contrary to all the traditions of medicine; yet it has grown and spread like an insidious disease until it has become scandalously prevalent and threatens to discredit the whole profession everywhere. While the pernicious custom has always been deplored by conscientious medical men it has never received serious attention nor has a concerted movement toward its eradication ever come to a head; it has long been preached at but no vigorous action against it has ever been instituted, with the result that to-day the secular magazines and the lay press are beginning to denounce the practice and the profession in no mistaken terms. In *Pearson's Magazine* for September, eight pages are devoted to a discussion of the subject and in very plain language the profession is called to account. But numerous writers have touched the canker from time to time in various medical societies over the country although remedial measures have gone no further than these polemical dissertations.

There seems to have been, and there still is we fear, a spirit of incredulity in a large part of the profession toward the real facts in the case, an attitude that is in part at least responsible for the present condition. *The Journal of the American Medical Association* for March 11, 1911, in an editorial discussion of the "Secret Commission Evil," says: "The giving and receiving of secret commissions has been discussed with increasing frequency for several years. Although the existence of the practice has long been recognized we have always believed that it has been confined to a comparatively small number of physicians. . . . We are loathe to believe that the condition is as bad as represented." This editorial condemns the practice roundly enough but its few words of mitigation practically annul its force.

More to the point is a paper recently read before the Jackson County Medical Society by Dr. Scott P. Child, who says, among other things: "There is not a difference of opinion that commercialism with its parasites, speculation and graft, has a strong hold in our midst and that by certain practices resorted to, openly or in secret, the high purposes of the profession are thwarted, the individual and public welfare is disregarded, and the true development of medical science is checked, and may I add, the regular profession is humbled." The full text of Dr. Child's paper appears on another page<sup>1</sup> in this issue, and should be read and pondered by every member; furthermore, it should be made the subject of discussion in every component county medical society.

There is urgent and crying need of systematic and determined effort to correct this shameful abuse which has become the Achilles-heel of medicine; to punish the offenders and if need be to drive them without the camp. This cannot be accomplished through sporadic reading of compositions or earnest editorials; it must be done by active and untiring measures on the part of the medical societies with the cooperation of all those who love their profession and hold her honor dear.

The secular press and journals should look to themselves also before they undertake to reproach us for this untoward state of affairs. As long as the press encourages the nefarious commercialism of every faker and of every fraud that walks by sanctioning his methods and aiding his schemes in the publication of cards and claims in the advertising columns, just so long will the condition exist that makes possible the evil of fee-splitting with its attendant crimes, for it is generally admitted that financial costiveness is the contributing occasion for it, and although this cannot excuse the delinquency of the guilty practitioner its pertinency to the main question must be recognized. The magazine that so loudly called us to task is not beyond or above the very condemnation it would heap on the profession, for in its pages appear advertisements exploiting that sort of trades-people whose unethical foraging on the territory of legitimate medicine is responsible in large measure for the existence of the blemish that has come to be a real blot on our escutcheon. Newspapers and lay periodicals generally should realize that there is a code of ethics incumbent on them and that they are under an obligation to the public whom they are supposed to serve to protect the people from the wiles of the charlatan and from the ravages of the voracious human shark. They should also realize that they owe something along this line to the medical profession as well.

In one of his addresses, Dr. William Osler says: "Always seek your own interests, make

1. See p. 225.



of a high and sacred calling a sordid business, regard your fellow-creatures as so many tools of trade, and if your heart's desire is for riches they may be yours; but you will have bartered away the birthright of a noble heritage, traduced the physician's well-deserved title of the Friend of Man, and falsified the best traditions of an ancient and honorable Guild."

The spirit of that peroration should prompt the organized medical profession to an active investigation of the calamitous condition that obtains only too generally and incite a determined movement for its immediate elimination.

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### MEDICAL COLLEGE MERGER IN ST. LOUIS

On October 18 preliminary articles of agreement to the merger of the American Medical College and the Medical Department of Barnes University were signed. Two days later the American Medical College secured a five-year lease of the Barnes University building, on Garrison and Lawton Avenues, together with the equipment therein contained. The Barnes building was formally turned over to the trustees of the American Medical College on October 21. The laboratory equipment of the American Medical College was moved into the Barnes building and added to the equipment of the Barnes Medical College. Lectures were continued in both institutions without interruption during the time negotiations were pending. The medical course will be given under the corporate name of the American Medical College (in affiliation with Barnes University).

This action marks a forward step toward higher medical education in St. Louis. The union carries with it the Christian-Centenary Hospital as well as the American Hospital.

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### STANDARDIZATION OF DRUGS

Recalling our experiences of the past, we look with distrust and misgivings on every proprietary article, whether a pharmaceutical specialty of home production or a coal tar synthetic from the Fatherland, until it has been accepted by our Council on Pharmacy and Chemistry. Recent reports of the Council and the Association's chemical laboratory show, however, that a whole lot of drugs besides proprietaries are bad. These are in the main substances of so little importance that it has not seemed worth while to those who make, buy or sell them to have them of good quality. Believing that all drugs, whether used much or little, should be of good quality, the Council with the help of the chemical laboratory has been examining some of the less widely used

drugs found on the American market. A report of this kind appears in a late issue of *The Journal of the American Medical Association*,<sup>1</sup> and deals with calcium phenolsulphonate, better known as calcium sulphocarbolate. While expressing doubt as to the therapeutic value of sulphocarbolates in general, the Council decided to describe this article because it was thought that the establishment of a standard would improve the quality of the product on the market.

As a preliminary to such standardization the laboratory examined the product sold by four firms. *All four brands were found to be unsatisfactory.* Having been advised of the laboratory's findings two firms, the Abbott Alkaloidal Company and the Mallinckrodt Chemical Works, improved their product so as to make it comply with the standard adopted.

That the Abbott Alkaloidal Company took prompt steps to improve its product is not surprising for we are under the impression that it has claimed to be "the home of sulphocarbolates." The action of the Mallinckrodt Chemical Works deserves special recognition, for the sales of calcium sulphocarbolate are infinitesimal as compared with its total output of chemicals and the firm might well have adopted the course of inaction pursued by the other two firms. It seems, however, that the Mallinckrodt Chemical Works goes on the principle that not only its "leaders" must be of good grade but all its products are to be of a dependable quality. We are pleased to note that it is a Missouri firm which has taken this correct attitude.

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### THE METALLIC PEROXIDS

Just as physicians are inclined to speak of or to write for "quinin" and "morphin" with the expectation of being understood to mean quinin sulphate and morphin sulphate, so we are apt to hear or read statements to the effect that a wound or ulcer was cleaned with "peroxid." In such cases, the solution of hydrogen peroxid is, of course, intended. It should, however, be remembered that a considerable number of peroxids, other than hydrogen peroxid, are being used in medicine. That these other peroxids are gaining some favor is shown by the fact that the Council on Pharmacy and Chemistry has considered them of sufficient importance to describe them with "New and Nonofficial Remedies."<sup>2</sup>

In this description are mentioned calcium peroxid, magnesium peroxid, strontium peroxid, sodium peroxid and zinc peroxid. The description of these individual peroxids is preceded by a general discussion in which it is explained how these peroxids differ from each other and from hydrogen peroxid in their physical and chemical

1. Jour. Am. Med. Assn., Oct. 21, 1911, p. 1383.

2. Jour. Am. Med. Assn., Oct. 7, 1911, p. 1209.

properties and how this affects their medicinal use. Physicians who are interested in peroxids should read the Council's description of this class of products.

## CORRESPONDENCE

### FEE DIVISION CONDEMNED

KANSAS CITY, Oct. 23, 1911.

*To the Editor:*—You are no doubt cognizant of the agitation of the subject of the ethics of the profession, not only in western Missouri, but all over the country, and especially that most abused, far-reaching, defamatory practice of *fee splitting*.

The Jackson County Medical Society at its last meeting discussed this subject following a paper by Dr. Childs, a copy of which I enclose. The country doctor who brings a patient for operation and gives this operative interference to the highest bidder is the first offender, while the surgeon who operates under these circumstances should blush with shame at his part of the proceeding, and should be branded accordingly. The secular press of Kansas City I hope may continue and take hold of the subject, but with the little they have said quite a number of people are discussing it with the result that will reflect to some extent on all the members of the profession alike.

Publicity in these matters seems to be the only cure, as this has accomplished a great deal in all other grafts, and when the people understand what is being done they will thus be well informed; then and not until then will this blot on the escutcheon of our noble profession be wiped out. This subject should be written about and talked about until it is indelibly impressed on each and every doctor in the land; and not until it is completely stopped will the public again bestow its confidence in our profession. If we are all guilty let us begin at once to deplore the past and resolve in the future to exalt the code and pronounce past errors a blessing.

There is, Doctor, a place here for a reform, if our professional ethics are to be upheld. Are we tearing down this great structure, whose foundation was built in the time of Galen and Hippocrates, and has been upheld by the most sincere and self-sacrificing, honest and brave men of all the ages down to the present time? Let us, each and every one of us, answer this question.

A MEMBER.

### ERRORS IN DR. CAULK'S PAPER

*To the Editor:*—I find several mistakes in my article in the November number. In the first place the title is wrong. It should be "Unrecog-

nized" instead of "Recognized" in the index on the front page.

In the title on page 193 it should read *disturbances* instead of *disturbance*. In the second column on page 194 near bottom seems entirely mixed. Starting after the semicolon, fourteen lines from the bottom of page, text should read: "but I feel that a great many of them are, and that the prostate should be ruled out before one satisfies himself as to the cause of these pains.

It is extremely important, especially in older men not to disregard the prostate when such pains present themselves, particularly pains in the hips, as they are frequently indications of a prostatic cancer, and an early diagnosis is essential. An interesting referred manifestation is herpes preputialis. I can find no reference made to it in literature but it is a frequent symptom in association with disorders of the prostate and deep urethra. The following case is a good example:"

I trust these errors may be corrected.

Very sincerely,

JNO. R. CAULK.

### VACCINATION APPROVED

ST. LOUIS, Oct. 20, 1911.

*To the Editor:*—The following resolution was passed by the Medical Society of City Hospital Alumni:

WHEREAS, Mandamus proceedings have been brought against the St. Louis Board of Education seeking to compel the admission of unvaccinated children to the public schools, and

WHEREAS, The rule thus assailed has been many years in existence and always rigidly enforced, and

WHEREAS, Such rule is proper, reasonable and necessary for safeguarding the health of the pupils, therefore be it

*Resolved*, That the Medical Society of the City Hospital Alumni heartily endorses the action of the Board of Education in enforcing the rule excluding unvaccinated children from the schools. And be it further

*Resolved*, That a copy of this resolution be furnished to the Board of Education and to the medical and lay press of this city.

Yours very truly,

F. C. SIMON, M.D., Secretary.

### ENJOYS READING THE JOURNAL

ST. LOUIS, Oct. 17, 1911.

*To the Editor:*—Through the misunderstanding on the part of the maid at my residence THE JOURNAL was refused on its delivery last Satur-



day and our mail carrier so reported it. This is a mistake, indeed, and I wish it might be corrected, as I enjoy its monthly visits to my office.

Very truly yours,

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## NEWS NOTES

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DR. CLEVELAND H. SHUTT has been appointed Hospital Commissioner for St. Louis.

THE Missouri State Nurses' Association held its annual meeting in St. Louis, October 11-13.

THE American Association of Railway Surgeons held its eighth annual meeting in Chicago, October 18-20.

DR. W. F. WYCKOFF of Kansas City was assaulted and robbed on the streets by a negro on October 20.

THE Medical Society of City Hospital Alumni, St. Louis, celebrated its twentieth anniversary on November 2.

MR. CHARLES ZUEBLIN delivered an address before the City Club, St. Louis, on October 16 on the subject of "Social Hygiene."

THE Southwest Missouri Medical Association held its fall session at Springfield, October 26-27. About twenty members were present.

DR. ROBERT H. GOODIER, president of the Association, has moved from Hannibal to Stoughtonville, where all mail for him should be addressed.

THE second annual meeting of the American Association for the Study and Prevention of Infant Mortality was held at Chicago, November 16-18.

THE North Missouri Medical Society held a successful meeting at Moberly, October 19. Kirksville was chosen for the next meeting to be held January, 1912.

THE St. Louis Board of Health has begun a campaign of prosecution of Christian Science healers who are violating the statutes governing the practice of medicine.

THE hospital board of Kansas City has appointed several negro physicians to act as assistants to the visiting staff for the care of the negro inmates of the hospital. Those appointed are: Drs. W. H. Tompkins, M. O. Beausfield, E. J. McCampbell, J. Edward Perry.

BARNES Medical College has been taken over by the American Medical College, and the two institutions have been combined. Dr. James Moores Ball will be dean of the consolidated school. A charter for the new institution will be sought but no name has yet been chosen.

The following articles have been accepted by the Council for New and Nonofficial Remedies: Lutein Tablets (Hynson, Westcott & Co.).

Calcium phenolsulphonate (Mallinckrodt Chemical Works).

Calcium phenolsulphonate (Abbott Alkaloidal Co.).

Pankreon (Chemische Fabrik Rhenania).

Bismon (Kalle & Co.).

THE American Public Health Association will hold its thirty-ninth annual meeting at Havana, Cuba, December 5-9. The program of the meetings of the general Association will include a symposium on Asiatic cholera, a symposium on hookworm disease, and a symposium on tuberculosis, and papers on pellagra, acute anterior poliomyelitis, typhoid fever, isolation hospital construction and management, Mexican typhus, and other subjects. Committee reports of great interest will be presented.

A NEW sanatorium for the treatment of nervous and mental diseases will be established in Springfield about January, 1912, by Dr. S. A. Johnson, at present assistant physician in the State Hospital at Nevada. Dr. Johnson has purchased a three-story building, well adapted to sanatorium purposes, and will equip the institution with modern appliances and apparatus. The hospital will accommodate about thirty patients. He will devote his practice entirely to diseases of the nervous system and give the institution his personal attention. Dr. Johnson formerly practiced at Springfield leaving there to accept the position in the State Hospital.

THE following manufacturers of biologic products have been licensed by the Secretary of the Treasury to produce and sell antityphoid vaccine in interstate traffic:

Parke, Davis & Co., Detroit, Mich.; H. K. Mulford Co., Philadelphia.; the Cutter Labora-

tory, Berkeley, Cal.; G. H. Sherman, M.D., Detroit, Mich.; National Vaccine and Antitoxin Establishment, Washington, D. C.; Lederle Antitoxin Laboratories, New York City; Burroughs, Wellcome & Co., London, England (office for the United States, New York City); Swiss Serum and Vaccine Institute, Berne, Switzerland (agents for the United States, Pasteur Vaccine Co., New York City).

## DEATHS

DR. HENRY CLAY DALTON of St. Louis, Missouri Medical College, died at the Deaconess Hospital, St. Louis, November 3, from appendicitis and Bright's disease.

DR. OSCAR H. BENKER of St. Louis died very unexpectedly on board ship during his return journey from Europe, Oct. 21, 1911.

## SOCIETY PROCEEDINGS

### SOUTHEAST MISSOURI MEDICAL SOCIETY

The Southeast Missouri Medical Society held its semi-annual convention at Poplar Bluff, October 17-18-19. This was a very successful meeting. The Society went on record as favoring Capital State Board Supervision of County Health Officers, the State paying compensatory salaries.

The following is a program of this meeting:

TUESDAY, OCTOBER 17, 8 P. M.

Opening Exercises and Addresses of Welcome.....

WEDNESDAY, OCTOBER 18, 8:30 A. M.

"Consultation" ..... Dr. W. R. Goodykontz  
 "Public Health and Sanitation in the Rural Districts and Smaller Towns" ..... T. W. Cotton  
 "Medical Jurisprudence" ..... W. A. Kendall  
 Paper ..... A. H. Hamel  
 "Some Stomach Cases I have Recently Encountered" ..... W. H. Weseoat

AFTERNOON SESSION, 1:30 P. M.

"Transposed Liver With Ascites" ..... W. B. Hays  
 "Surgery Piles" ..... A. C. Shoek  
 "Reminiscences of Pioneer Days in the Practice of Medicine in Southeast Missouri" ..... B. C. Jones  
 "Summer Complaint" ..... W. P. Howle  
 "Differential Diagnosis Between Iritis and Glaucoma" ..... J. W. Mott  
 "Disease of Gall-Bladder and Gall-Duct" ..... W. F. Grinstead

EVENING SESSION, 7:30 P. M.

"Specific Indications for Most Commonly Used Drugs" ..... A. W. Davidson

Congressman Russell addressed the Society and the citizens at the entertainment given by the Butler Medical Society, and he said, "unless authorized by this society not to, he would vote for the Owens bill which provides for a health officer in the cabinet."

He told the pathetic story of the man whose wife had tuberculosis. This man applied to the Secretary of Agriculture to know if the Government could give him any information as to how best to care for and cure his wife. The reply came that the Government had made no provision along such lines and could offer him no suggestions. The next day a man wrote to the Secretary of Agriculture, and told him his hogs had the cholera, and asked what could be done. The Secretary immediately sent a man with hog cholera serum and a syringe to protect and cure the hog. We want the Government to care for the health of our wives and family as it is now caring for the health of our hogs.

Among the diversions was a trip through the Dalton Adding Machine Factory, and an hour's automobile ride over the city, both of which were heartily enjoyed.

The next meeting of this Society will be held at Farmington on the first Tuesday in May.

The Southeast Missouri Medical Society is one of the oldest organizations of its kind in the state. It always has stood for the advancement of medical science and art. It fosters the friendly feeling among the profession of the Southeast, and is ever ready to praise the good works of its members and to condemn that which is bad.

Every physician should join this society and do his utmost to preserve its life for the betterment of himself and his people.

### MEDICAL SOCIETY OF THE SOUTHWEST

The sixth annual meeting of the Medical Association of the Southwest was held at Oklahoma City, October 11 and 12, and proved to be the banner meeting in the history of the association in point of number registered, excellence of program and variety of social features.

"The Management of the Nervous Child" was the subject of the president's annual address, delivered by Dr. M. L. Perry. The following Missouri members read papers:

Dr. C. B. Hardin, Kansas City, on "Ulcers of the Stomach and Duodenum." Dr. Wm. Frick, Kansas City, on "Recent Advances in the Diagnosis and Treatment of Syphilis." Dr. Jabez N. Jackson, Kansas City, on "Retrocecal Appendicitis." Dr. J. F. Binmie, Kansas City, on "Intestinal Stasis." Dr. John G. Sheldon, Kansas City, on "Incisions." Dr. S. Grover Burnett, Kansas City, on "Promo Delirium." Dr. A. W. McArthur, Kansas City, on "Significance of Pain in the Upper Abdomen." Dr. H. C. Crowell, Kansas City, on "Total or Subtotal Hysterectomy." Dr. J. D. Griffith, Kansas City, on "Treatment of Sequela of Poliomyelitis." Dr. D. L. Shumate, Kansas City, on "Tonsillar Adenoids."

Officers elected for 1912: President, A. L. Blesch, Oklahoma City; vice-presidents, F. B. Young, Springfield, Ark.; G. Wile Robinson, Kansas City, Mo.; W. H. Freeman, Lockney, Tex.; secretary-treasurer, Fred H. Clark, El Reno, Okla.

The next meeting will be held at Hot Springs, Ark., and will continue for three days instead of two days as hitherto.

### ADAIR COUNTY MEDICAL SOCIETY

The Adair County Medical Society held its regular monthly meeting on Thursday evening, October 5, in the office of Dr. E. C. Callison, at Kirksville. All members were present.

The committee on post-graduate study reported progress and was granted further time in which to complete its report.

The application of Dr. C. M. C. Willeox of Kirksville, was reported favorably by the censors and Dr. Willeox was elected a member.

Dr. E. C. Callison reported a very interesting case of encephalon and exhibited the specimen. Dr. Calli-



son discussed in a most interesting manner the etiology of this condition and thoroughly elucidated the principal characteristics of the specimen. The subject was discussed by all the members.

Dr. Callison talked on the subject of neurasthenia, carefully classifying the varieties and expressing special emphasis upon neurasthenia sexualis. This subject brought forth a very thorough discussion.

The next meeting will be held on the first Thursday in November.

BERT B. PARRISH, M.D., Secretary.

### BUTLER COUNTY SOCIETY

The Butler County Medical Society met in regular session in the County Clerk's office at 8 p. m.

Dr. J. M. T. Smith was elected president pro tem in the absence of Dr. Taylor. Those present were, Drs. Smith, Davidson, Mott, Seybold, Kendall and Spaulding.

Dr. Seybold reported a case of death following childbirth. The symptoms came on immediately and were as follows: pain in upper bowel and stomach, temperature 99 to 103; lochia apparently normal, nausea, tenderness over abdomen, offensive discharge from bowels; soft, very friable placenta, woman small built and delicate. After a heated discussion it was decided that death was due to peritonitis.

Dr. Davidson reported a case of child who one week ago had chill and fever with intense pain in left forearm; hand paralyzed. Child recovered somewhat and following Sunday went to neighbor's; became excited and on way home got worse. Pain extended to shoulder and neck, and muscles of deglutition were paralyzed, with profuse flow of saliva; no temperature; pulse 116; respiration 20 and shallow. Strychnine, belladonna and 1/10 gr. calomel tablets were given. Child died at 2:00 a. m. Monday. Diagnosis of myelitis or multiple neuritis.

It was moved and carried that meeting night be changed from Monday to Friday.

Dr. Davidson's paper was referred to next meeting owing to the lateness of the hour.

WM. SPAULDING, M.D., Secretary.

### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society held its regular monthly meeting at Fayette, November 3, at the office of the secretary. Present: Richards, Wright, Lee, Lewis, Bonham, Burgwin, Payne, Gentle, Watts and A. R. McComas, Councilor of the district.

There being no papers on the program and no clinical reports or patients, the society listened to a talk by Dr. McComas on "Senility." The subject was presented in a most interesting and practical manner and brought out much discussion. Dr. Lewis, during the discussion, called out some very interesting queries concerning the filing of death certificates.

The following officers for 1912 were elected: President, Duke Gentle, New Franklin; first vice-president, T. C. Richards, Fayette; second vice-president, J. Y. Hume, Armstrong; secretary, C. W. Watts, reelected. Delegate, V. Q. Bonham, Fayette; alternate, U. S. Wright, Fayette; censors, V. Q. Bonham, C. H. Lee.

The secretary read his report for the year; four meetings had been held and two papers read; the average attendance was ten.

Dr. C. O. Lewis was appointed to read a paper at the next meeting and the society extended an invitation to the State Secretary, Dr. E. J. Goodwin, to attend that session and address the members.

Dr. Wright in retiring from the presidency delivered an eloquent and feeling speech. Dr. Gentle in taking the chair addressed the members and outlined the

year's work before the society, dwelling especially upon prompt attendance and discharge of duties imposed on all.

The next meeting will be held on Friday, December 1.

C. W. WATTS, M.D., Secretary.

### SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in called session at Marshall on October 20. Dr. Wm. Harrison presided and Dr. J. R. Hall acted as secretary.

The following officers were elected: President, A. E. Gore, Marshall; vice-president, A. Fletcher Brown, Malta Bend; second vice-president, W. L. Sharp, Arrow Rock; third vice-president, Aubrey Howard, Slater; secretary, John R. Hall, Napton.

The following were elected members: R. P. Price, Slater; J. E. Connell, Marshall; G. E. Scrutcheff, Marshall; F. L. Anderson, Marshall; A. Fletcher Brown, Malta Bend; J. R. Brown, Malta Bend; T. W. Tuttle, Mt. Leonard; H. S. Quigg, Marshall.

The President appointed the following committee on program: J. E. Harris, M. S. McGuire, J. R. Hall.

Dr. H. E. Pearse of Kansas City, was present and addressed the meeting.

The following program was arranged for the next meeting: "Typhoid Fever: Its Treatment," by Dr. John R. Hall, Napton.

The next meeting will be held at Slater on November 21, at 1 p. m.

## BOOK REVIEWS

INTRODUCTION TO PRACTICAL ORGANIC CHEMISTRY. Including Qualitative and Quantitative Analysis and Preparations, with a special appendix on the London University Syllabus, and schemes of analysis for Stages 1 and 2 of the Board of Education Syllabus. By A. M. Kellas, B.Sc. (London.), Ph. D. (Heidelberg), Lecturer on chemistry at the Middlesex Hospital Medical School, etc., etc. 8 vo. cloth. pp. 204. Fifty figures. New York, Oxford University Press. 1910. \$1.35.

This author possesses the grace of practicability, and this volume like its predecessor on Inorganic Chemistry has been compiled with a view to making the subject accessible to the student.

The various phases of the subject have been presented in as systematic a fashion as possible, and in the order in which they are usually approached. Special pains have been taken in indicating General Reactions that the general principles may be readily comprehended. While the book is of course intended primarily for the student its treatment of chemistry is such that it commends itself to the general practitioner as well.

MANUAL OF THE DISEASES OF THE EYE FOR STUDENTS AND GENERAL PRACTITIONERS. By Chas. H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903, etc., etc. Seventh edition, revised. pp. 407. 362 original illustrations, including plates and colored figures. New York, William Wood & Co. 1911. \$2.00 net.

The text has been subject to a careful revision and this edition possesses new paragraphs on Trachoma Bodies, Salvarsan in Syphilitic Ocular Affections, Injection of Tuberculin, etc. Also an entirely new chapter on Ocular Manifestations of General Diseases.

Dr. May's work is so well known and so thoroughly appreciated that we feel no further mention of the new edition is necessary.

**TEXT-BOOK OF MASSAGE.** By L. L. Despard, Member and Examiner Incorporated Society of Trained Masseurs. 8 vo. cloth. pp. 290, 203 figures. New York. Oxford University Press. 1911.

The professional masseur will find this a most excellent book on the subject. The theory of massage is intelligently presented together with the principles of elementary anatomy and physiology. Massage is discussed in all its therapeutic aspects, the various forms of massage taken up with an enumeration of the various affections for which massage has been found beneficial. The text is supplied with liberal illustrations. This is by far the most satisfactory book on this subject that we have seen.

**A MANUAL OF MATERIA MEDICA FOR MEDICAL STUDENTS.** By E. Quin Thornton, M.D., Asst. Prof. of Materia Medica in the Jefferson Medical College of Philadelphia. pp. 525. Lea & Febiger, Phila. & New York. 1911.

The author has given us a thoroughly practical book, the fruit of long experience in laboratory and lecture room, and it has been compiled with the wants and capabilities of the average student in mind. As the book is examined its merits appear and we are sure that it will be enthusiastically received.

Part I is devoted to the discussion of Posology, Prescription Writing, Latin Essentials in Prescription Writing, Incompatibility, and Weights and Measures. Part II considers the drugs, chemicals and preparations official to the U. S. Pharmacopeia, and Part III gives a complete list of the U. S. Pharmacopeia preparations, arranged according to pharmaceutical classes. In the appendix will be found a complete alphabetical list of official substances, with the average dose for adults, according to the U. S. Pharmacopeia.

**MANUAL OF CYSTOSCOPY.** By J. Bentley Squier, M.D. Prof. of Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital, and Henry G. Bugbee, M.D. Instructor in Genito-Urinary Surgery, New York Post-Graduate Medical School and Hospital. 8 vo. Flexible Leather. pp. 117, 26 plates. New York. Paul B. Hoeber, publisher. 1911. \$3.00 net.

A valuable and concise presentation of cystoscopic technique. The anatomical diagrams will be especially appreciated by the beginner. The colored plates of intra-vesicle lesions have been prepared with particular care and accuracy. The volume is entirely adequate as a short and practical consideration of the subject and there will be a demand for it when its worth is known.

**DISEASES OF THE STOMACH WITH SPECIAL REFERENCE TO TREATMENT.** By Chas. D. Aaron, Sc.D. M.D. Prof. of Gastroenterology and Adjunct Prof. of Dietetics in the Detroit College of Medicine, etc., etc. 8 vo. pp. 555. 42 illustrations and 21 plates. Philadelphia and New York. Lea & Febiger. 1911.

This volume is intended for the actual needs of the practitioner, hence the etiology, symptomatology, pathology, and diagnosis are given only the consideration necessary to a proper comprehension of the therapeutic methods proposed.

Careful attention has been given the use of antilytic serum, and bacterial vaccines. In the chapter on Examination of Stomach Contents are included those tests which seem to the author best suited to assist the physician in diagnosis and treatment. Surgical treatment is simply indicated. Emphasis has been placed upon the neurogenous phases of the subject which have been treated under proper subdivisions.

The author has been careful to avoid the error of spreading the work over too much space and consequently we have a practical and concise discussion of the subject. The type is large and clear, and the edition is attractive from the standpoint of the book binder.

**PRACTICAL MEDICAL CHEMISTRY FOR PHYSICIANS AND STUDENTS.** By Charles Platt, A.C., M.D., Ph.D., F.C.S. London, and Wm. A. Pearson, Ph.C., Ph.D., Member of the American Chemical Society, etc., etc. 8 vo. pp. 260. Sixth edition rewritten and enlarged. Philadelphia, John Jos. McVey. 1911. \$2.50 net.

The aim of the authors has been to supply a textbook suitable for physician or class room. Its treatment of the subject is especially broad to render it adaptable for the instructor's use. This edition has been carefully revised and brought up to date. The main divisions of the work are: Part I. Qualitative Analysis; Part II. Chemistry of the Carbon Compounds; Part III. Physiological and Clinical Chemistry. The Appendix contains Tables of Weights and Measures, Preparation of Percentage Solutions, a List of Acid Radicals, and other similar matters.

**DIFFERENTIAL DIAGNOSIS PRESENTED THROUGH AN ANALYSIS OF 383 CASES.** By Richard C. Cabot, M.D. Asst. Prof. of Clinical Medicine, Harvard University Medical School, Boston. pp. 753. Illustrated. Philadelphia & London. W. B. Saunders Co. 1911.

This work is a consideration of the "presenting symptom." The author says, "I hope to show how the complaints of the patient should be used as 'leads,' and how this 'lead' can be followed to the actual seat of the disease. The plan of the work has three parts. (a) The presentation of the common causes of the symptoms most often complained of by patients. (b) The classification of these causes in order of their frequency, so far as possible, and (c) The illustration of them by case-histories in which the presenting symptom is followed home until a diagnostic problem and its solution are presented."

The author has avoided the selection of cases in which diagnosis was obvious or fortuitous, and has endeavored to give the profession a practical work along the lines indicated in the title from the standpoint of clinical experience.

**A MANUAL OF OTOTOLOGY.** By Gorham Bacon, A.B., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York. Cloth. Fifth Edition. pp. 492. Illustrated. Philadelphia. Lea & Febiger. Price, \$2.25.

This edition has attained the goal sought for by many: the elimination of all superfluous verbiage and the condensation of the subject to a degree just reaching the climax of a concise description of the matter in hand. The work should be owned by everyone working in the field of otology. It is particularly adapted to the needs of the general practitioner and the student. The conservative view taken by the author of the questionable operations which have for their aim the restoration of hearing strikes a sympathetic cord. It is an admirable presentation of the subject.

**SURGICAL APPLIED ANATOMY.** By Sir Frederiek Treves, Bart. G.C.V.O., C.B., LL.D., F.R.C.S. Sergeant Surgeon to H. M. the King, etc., etc. Sixth edition, revised by Arthur Keith, M.D., LL.D. Aber., F.R.C.S. Eng. Illust. pp. 676. Lea & Febiger, Philadelphia and London. 1911.

This work is familiar to us all and needs no word of recommendation. The sixth edition has received numerous additions, the principal alterations occur in those chapters treating of abdominal anatomy, the glands of internal secretion, and body discoveries made by means of the x-ray.

The book retains the convenient size of former editions.

**FOOD VALUES.** Practical tables for use in private practice and public institutions. By Edwin A. Locke, A.M., M.D. Instructor in medicine, Harvard Medical School. pp. 110. New York & London. D. Appleton & Co. 1911. \$1.25.



A unique book of tables and text dealing with the composition and nutritive value of all common foods. It is practical and simple in plan and arrangement and commends itself to nurses, and those in charge of the cuisine of hospitals and sanatoriums.

**CASE HISTORIES IN PEDIATRICS.** A collection of histories of actual patients selected to illustrate the diagnosis, prognosis, and treatment of the most important diseases of infancy and childhood. By John Lovett Morse, A.M., M.D. Asst. Professor of Pediatrics, Harvard Medical School, etc., etc. pp. 314. W. M. Leonard, Boston, 1911. Price \$3.00.

The 100 cases cited have been so wisely selected that they furnish a comprehensive review of the field. Each case is treated from the standpoint of history, physical examination, diagnosis, prognosis and treatment.

**PRACTICAL SUGGESTIONS IN BORDERLAND SURGERY.** For use by students and practitioners. By Gustavus M. Blech, M.D., Professor of Clinical Surgery, Medical Department, Loyola University, etc., etc. Philadelphia, Professional Publishing Co.

This is an exceptionally interesting and valuable book. Every practitioner should read it as it is an important contribution to the literature in pointing to those conditions that we might expect to meet with in the practice of general medicine.

**REFRACTION AND VISUAL ACUTY.** By Kenneth Scott, M.D., C.M., F.R.C.S. Edin. Consulting ophthalmic surgeon to St. Mary's Hospital for Women and Children, London, etc., etc. With sixteen illustrations and a colored plate. pp. 191. New York. Rebman Co. 1911.

This book is intended as an aid to the general practitioner in cases that arise in every day practice requiring some knowledge of the essentials of ophthalmology. It is thoroughly practical and will prove to be a decided help to the average physician in his practice.

## BOOKS RECEIVED

**CASE HISTORIES IN PEDIATRICS.** Collection of histories of actual patients selected to illustrate the diagnosis, prognosis, and treatment of the most important diseases of infancy and childhood. By John Lovett Morse, A.M., M.D. Asst. Prof. of Pediatrics, Harvard Medical School, etc., etc. 8vo. pp. 320. Illust. Boston. W. M. Leonard, 1911. \$3.00.

**PRIMER OF HYGIENE.** By John W. Ritchie, Prof. of Biology, College of William and Mary, Va., and Jos. S. Caldwell, Geo. Peabody College for Teachers, Tennessee. Illust. pp. 184. World Book Co. Yonkers-On-Hudson, N. Y.

**MANUAL OF NURSING.** By Margaret Frances Donahoe, formerly Superintendent of Nurses and Principal of Training School, Philadelphia General Hospital. 8 vo. pp. 489. Illust. New York. D. Appleton & Co.

**FOUR EPOCHS OF LIFE.** By Elizabeth Hamilton-Muncie, M.D., Ph.M. 8 vo. pp. 272. Greaves Publishing Co. New York.

**HYGIENE AND MORALITY.** A manual for nurses and others, giving an outline of the medical, social, and legal aspects of venereal diseases. By Lavinia L. Dock, R.N. Graduate of Bellevue Hospital Training School, etc., etc. 8 vo. pp. 299. New York. G. P. Putnam's Sons.

**THE PARASITIC AMOEBA OF MAN.** By Chas. F. Craig, M.D., U.S.A. From Bacteriological Laboratory of the Army Medical School, Washington, D. C., and the Rockefeller Institute for Medical Research. New

York City. Published with the authority of the Surgeon-General of the U. S. A. 8 vo. pp. 253. Illustrated. Philadelphia & London. J. B. Lippincott Co. 1911. \$2.50.

**PRINCIPLES OF PUBLIC HEALTH.** A simple text-book on hygiene presenting the principles fundamental to the conservation of individual and community health. By Thos. D. Tuttle, M.D. Secretary and Executive officer of the State Board of Health of Montana. pp. 186. Illust. World Book Co. Yonkers-On-Hudson, N. Y.

**PREVENTION OF SEXUAL DISEASES.** By Victor G. Veeki, M.D. Ex-president San Francisco German Medical Society, etc., etc. With introduction by Wm. J. Robinson, M.D. pp. 132. New York. Critic & Guide Co. \$1.50.

**THE MECHANISM OF LIFE.** By Dr. Stephane Ledue, Professeur a l'Ecole de Medecine de Nantes. Translated by W. Deane Butcher, formerly president of the Roentgen Society, etc., etc. pp. 172. Illust. New York. Rebman Co. 1911.

**CESARE LOMBROSO, A MODERN MAN OF SCIENCE.** By Hans Kurella, M.D. Author of "Natural History of the Criminal," etc. Translated from the German by M. Eden Paul, M.D. pp. 194. New York. Rebman Co.

**COMPENDIUM OF REGIONAL DIAGNOSIS IN AFFECTIONS OF THE BRAIN AND SPINAL CORD.** A concise introduction to the principles of clinical localization in diseases and injuries of the central nervous system. By Robert Bing, Privat-docent for neurology in the University of Basle. Translated by F. S. Arnold, B.A., M.B., B.Ch. (Oxon). Revised by D. I. Wolfstein. pp. 215. Illust. New York. Rebman Co.

**NOSTRUMS AND QUACKERY.** Based on articles on the Nostrum Evil and Quackery in The Journal of the American Medical Association, with additions and elaborations. Part I, Quackery. Part II, Nostrums. Part III, Miscellaneous. First Edition. Cloth. Price, \$1; with individual's name on cover, 25 cents extra. Pp. 509, with 220 illustrations. Chicago: American Medical Association, 535 Dearborn Avenue.

**SURGICAL APPLIED ANATOMY.** By Sir Frederick Treves, F.R.C.S., Sergeant-Surgeon to H. M. the King, Late Lecturer on Anatomy at the London Hospital. New (6th) edition, thoroughly revised. Pocket size, 12mo, 676 pages, 137 illustrations, of which many are in colors. Cloth, red edges, \$2.50, net. Lea & Febiger, Philadelphia and New York. 1911.

**HAND BOOK OF THE SURGERY OF THE KIDNEYS.** By W. Bruce Clarke, M.A., M.B. (Oxon.), F.R.C.S. Senior Surgeon to St. Bartholomew's Hospital, etc., etc. With 5 plates and 50 illustrations in the text. New York. Oxford University Press. 1911.

**MEDICAL INSPECTION OF SCHOOLS.** By Luther H. Gulick, M.D. Director of Physical Training New York Public Schools, and Leonard P. Ayres, Gen. Supt. of Schools Porto Rico, 1906-1908. pp. 276. Russell Sage Foundation. Charities Publication Committee. New York. 1908.

**NEW AND NONOFFICIAL REMEDIES, 1911:** Containing descriptions of articles which have been accepted by the Council on Pharmacy and Chemistry; of the American Medical Association, prior to Jan. 1, 1911. pp. 282. Chicago: A. M. A. Paper, 25 cents; cloth, 50 cents, 1911.

**THE HUMAN ATMOSPHERE, OR THE AURA MADE VISIBLE BY THE AID OF CHEMICAL SCREENS.** By W. J. Kilner, B.A., M.B. Gantab. M.R.C.P. etc. pp. 329. Illust. New York. Rebman Co. 1911.

**REFRACTION AND VISUAL ACUTY.** By Kenneth Scott, M.D., C.M., F.R.C.S. Edin. Consulting Ophthalmic Surgeon to St. Mary's Hospital for Women and Children, London, etc. etc. With 16 illustrations and colored plates. pp 191. New York. Rebman Co. 1911.

# **CATALOGUE ST. LOUIS MEDICAL LIBRARY** **3525 Pine Street**

*(Continued from page 224)*

National Confederation of State Medical Examining and Licensing Boards, 1910.  
 National Quarantine and Sanitary Convention, 1859.  
 Nebraska State Medical Society, 1884-1885; 1891, 1892, 1896, 1900.  
 New Hampshire Medical Society, 1886-1889; 1891-1892; 1894-1900; 1902-1909.  
 New Jersey Medical Society, 1807-1858; 1887, 1888; 1893-1896; 1899, 1901, 1903.  
 New York Academy of Medicine, 1857, 1864, 1874, 1883, 1886, 1893-1901.  
 Homeopathic Medical Society State of New York, 1863-1870.  
 New York Obstetrical Society, 1898-1899; 1906-1909.  
 Odontological Society, 1881.  
 New York State Medical Association, 1884, 1886, 1887-1888; 1890-1899.  
 New York Medical Society, 1807-1831; 1840-1843; 1851-1853; 1855, 1857-1905.  
 New York Pathological Society, 1877, 1878, 1889-1890; 1893-1896.  
 New York State Pharmaceutical Association, 1885-1895.  
 North Carolina Medical Society, 1889, 1890, 1893, 1895, 1899-1907.  
 North Dakota Medical Society, 1899.  
 Obstetrical Society of London, 1860-1892.  
 Ohio State Sanitary Association, 1888.  
 Ohio State Medical Society, 1880-1889; 1891-1895; 1898, 1899.  
 Ophthalmological Section of the American Medical Association, 1891-1894.  
 Oregon Medical Society, 1895.  
 Pan-American Medical Congress, 1895.  
 Pathological Society of London, 1846-1893; also Index.  
 Pathological Society of Philadelphia, 1860.  
 Pennsylvania Medical Society, 1868, 1875-1877, 1881, 1883, 1885, 1886-1896.  
 Pennsylvania Pharmaceutical Association, 1896.  
 Philadelphia Obstetrical Society, 1890, 1891.  
 Philadelphia Academy of Surgery, 1908, 1909.  
 Philadelphia County Medical Society, 1893.  
 Quarantine Conference, 1889.  
 Rhode Island Medical Society, 1876, 1881; 1892-1895; 1899-1909.  
 Royal Society of Medicine, London, 1909.  
 Royal Society of London, Philosophical, 1890.  
 St. Louis Medical Society of City Hospital Alumni, 1898-1907.  
 St. Louis Medical Society, 1878-1884; 1886, 1895-1897, 1899, 1901.  
 St. Louis Obstetrical and Gynecological Society, 1880, 1882, 1883, 1893-1895.  
 Sanitary Institute of Great Britain, 1879-1891.  
 Southern Dental Association, 1869.  
 Southern Surgical and Gynecological Association, 1893-1898; 1902.  
 Tennessee Medical Society, 1886, 1889, 1891-1894; 1899, 1903, 1904.  
 Texas Medical Association, 1884-1897; 1899-1904.  
 Tri-State Medical Society, 1902, 1903.  
 Vermont Medical Society, 1886-1889; 1893, 1899, 1900, 1901.  
 Virginia Medical Society, 1882, 1895.  
 Washington Medical Society, 1893, 1896, 1901.  
 West Virginia State Medical Association, 1904, 1905.  
 Western Association of Obstetricians and Gynecologists, 1893.  
 Western Ophthalmology, Otology, Laryngology and Rhinology Association, 1897, 1900, 1901.

Western Surgical and Gynecological Association, 1901-1908.  
 Wisconsin State Dental Society, 1875, 1876.  
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 Wyoming State Medical Society, 1898.

## **JOURNALS**

Alabama Medical Journal, Birmingham, Ala.—Vol. 12-23, 1900-1910.  
 Albany Medical Annals, Albany, N. Y.—Vol. 26-31, 1899-1910.  
 Alienist and Neurologist, St. Louis, Mo.—Vol. 1-22, 1880-1901; Vol. 24, 25, 1903, 1904; Vol. 28-31, 1907-1910.  
 Alkaloidal Clinic, Chicago, Ill.—Vol. 5, 6, 1898, 1899; Vol. 8, 1901; Vol. 10-12, 1903-1905.  
 Allgem. Deutsche Hebammen Zeitung, Berlin.—Vol. 23-25, 1908-1910.  
 American Chemical Journal, Easton, Pa.—Vol. 25-28, 1901-1902.  
 American Gynecology, New York—Vol. 1-2, 1902-1903.  
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 American Journal of the Medical Sciences, New York and Philadelphia.—Vol. 1-26, 1827-1840; Vol. 1-139, 1841-1910. New Series.  
 American Journal of Obstetrics, New York.—Vol. 1-61, 1869-1910.  
 American Journal of Ophthalmology, Vol. 1, 1863. New York; Vol. 13-27, 1896-1910. St. Louis, Mo.  
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 American Journal of Physiology, Boston, Mass.—Vol. 1-2, 1898-1899.  
 American Medical Intelligencer, Philadelphia, Pa.—Vol. 1-2, 1841-1842.  
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 American Medical Monthly.—Vol. 5-6, 1856, New York; Vol. 15, 1861, New York; Vol. 18-20, 1900-1903, Baltimore, Maryland.  
 American Medicine, Burlington, Vermont.—Vol. 1-16, 1901-1910.  
 American Medical Record, Philadelphia, Pa.—Vol. 2, 1819; Vol. 7-8, 1824-1825; Vol. 11, 1827; Vol. 16, 1829.  
 American Medico-Surgical Bulletin, New York—Vol. 6-12, 1893-1898.  
 American Monthly Microscopical Journal, Washington, D. C.—Vol. 7, 1886.  
 American Physician, Cleveland, Ohio.—Vol. 28-32, 1902-1906; Vol. 34, 1908.  
 American Practitioner, Louisville, Ky.—Vol. 1-7, 1870-1873; Vol. 15, 1877; 23, 1881; 25-26, 1882; 30, 1884; 31-32, 1885.  
 American Practitioner and News, Louisville, Ky.—Vol. 9-13, 1890-1892; Vol. 17-18, 1894; Vol. 20-35, 1895-1903; Vol. 38-43, 1904-1909.



- American X-Ray Journal, St. Louis, Mo.—Vol. 1-3, 1897-1898; Vol. 7-14, 1900-1904.
- American Electro-Therapeutic and X-Ray Era, Chicago, Ill.—Vol. 1-3, 1902-1903.
- American Quarterly of Roentgenology—Vol. 1, 1907.
- The Analectic, New York and London.—Vol. 1, 1884.
- Anatomical Record, Philadelphia, Pa.—Vol. 1-4, 1906, 1910.
- Annalen des Charite-Krankenhauses.—Vol. 13-15, 1865-1869; 1876, 1877.
- Anales de Oftalmologia, Mexico.—Vol. 11, 12; 1908, 1909.
- Annales de Dermatologie et de Syphiligraphie, Paris.—Vol. 10, 1889, third series; Vol. 1-10, 1900-1909, fourth series; Vol. 1, 1910, fifth series.
- Annales d'Oculistique, New York and Paris.—Vol. 113-115, 1895, 1896.
- Annals of Gynecology and Pediatrics, Philadelphia, Pa.—Vol. 4-6, 1890-1893; Vol. 12-22, 1898-1909.
- Annales de l'Institut Pasteur, Paris.—Vol. 13-24, 1899-1910.
- Annalen der Ophthalmologie, Tuebingen.
- Annales des Maladies des Organes Genito-Urinaires, Paris.—Vol. 11-12, 1893-1894; Vol. 20-28, 1902-1910.
- Annales des Maladies l'Oreille, du Larynx, etc., Paris.—Vol. 21, 1895; Vol. 25-36, 1899-1910.
- Annales Medico-Psychologiques, Paris.—Vol. 10-12, 1897-1900.
- Annali di Ostetricia E Ginecologia, Milan.—Vol. 29-31, 1907-1908.
- Annals of Medical Practice, Boston, Mass.
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- Annals of Surgery, Brooklyn, N. Y.—Vol. 1-2, 1878-1880; Vol. 7-8, 1883; Vol. 2-13, 1885-1891, St. Louis, Mo.; Vol. 15-51, 1892-1910, Philadelphia, Pa.
- Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berlin.—Vol. 16-17, 1899-1900.
- Archiv für Anatomie und Entwicklungsgeschichte, Leipzig.—Vol. 1879, 1881, 1882, 1883.
- Archiv für Anatomie und Physiologie, Berlin.—1851, 1852.
- Archives de Chirurgie, Paris.—Vol. 6-8, 1897-1899.
- Archives of Dentistry, Chicago, St. Louis and Atlanta, Ga.—Vol. 1-8, 1884-1891.
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- Archiv of Electrolgy and Radiology, Chicago, Ill.—Vol. 4, 1904.
- Archiv für Experimentale Pathologie und Pharmacologie, Leipzig.—Vol. 43, 44, 1900.
- Archives Generales de Medicine, Paris.—Vol. 10-18, 1868-1871, sixth series; Vol. 1-2, 1879, seventh series; Vol. 145-155, 1880-1885.
- Archiv für Gynaecologie, Berlin.—Vol. 81-86, 1907-1908.
- Archives of Internal Medicine, Chicago, Ill.—Vol. 1-6, 1908-1910.
- Archives et Journal de la Medecine Homeopathique, Paris.—Vol. 3, 1835.
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(To be continued)

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### ORIGINAL ARTICLES

#### SMALL-POX QUARANTINE IN PRACTICE AND ITS FAILURE

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At the present time, in St. Louis, agitation against general vaccination is taking decided form. Among the usual misquotations and garbled statements used by antivaccinationists, we find the well-worn assertions that vaccination kills more people than small-pox does, and that in general an attack of small-pox is preferable to vaccination; also that quarantine and sanitation suffice for the suppression of small-pox. It may be worth while, therefore, to consider the history of a little epidemic that shows how unpleasant small-pox may be when the advantages of vaccination are not properly utilized.

In October, 1910, a case of small-pox occurred in an institution for the feeble-minded at Lapeer, Mich. Within a few days there were several cases. Quarantine was instituted, but could not be maintained. "Attendants and workmen from the institution appeared on the streets of the adjacent city." As the authorities of the institution and the health officer of the county were unable to meet the situation, an appeal was made for state troops. On November 11 a company of infantry (three officers and forty men) appeared; they threw out "a line of sentries a mile and a quarter in length" around the home; the rest of the company prepared the camp. It may be supposed that this camp was a holiday affair, but the description of it by Major M. J. Phillips, in the *National Guard Magazine* for February, 1911, indicates that it was not unworthy of the characterization which General Sherman made of real war. "For seven days and seven nights Company A stood guard. Every man was on duty. None of them had more than four hours' sleep at any one time. When a relief was dismissed at quarters, the men put their rifles away, walked to their cots and

dropped almost to instant sleep on the blankets without removing a stitch of clothing, drugged with fatigue.

"When it was time to fall-in again, they staggered into line, still half asleep, and dragged themselves off to relieve their comrades.

"The eighth day there were sixteen men on sick report. They had high fevers and were suffering severely from vaccination sores.

"A sergeant and twenty men from another company were ordered as reinforcements." A later reinforcement brought the number up to sixty-eight.

The soldiers seemed to have done their part with exemplary skill. True to their training, they looked on the unfortunate, demoralized inmates of the home as their "enemy; eager, alert, deadly."

Range lights were placed around the patrol line, so that no refugee could get out of the grounds without exposing himself; when he did appear he was called on to halt. If he did not obey, or if there was some doubt about his intentions, a rifle ball was sent in his direction. Apparently no one was seriously injured by these rifle balls, but we read about bullets thudding into trees, whistling about ears and passing through coats. One individual is said to have been slightly wounded; at any rate, the report says that he "has not been seen about the grounds since." "The man who fell was heard to shout, 'for God's sake, boys, come on back; they are shooting real bullets.'"

This sort of duty, of course, was not good for vaccination sores. The fortitude with which the men bore their troubles would be praiseworthy had it not been so unnecessary. We read of two men with very bad arms who refused to stay in quarters, though urged by the major to do so. "When I need relief, I will ask for it, sir," said one man "whose left arm showed a hole in which a silver dollar could be laid."

Up to December 12 there had been thirty-three cases of small-pox and seventeen deaths from the disease in the home.



Not until the end of seven weeks were the troops relieved from what is described as "the most unaccustomed, dangerous duty, for which there is no parallel in recent militia history."

The honest soldier who writes the report makes the laconic statement: "The virulent type of small-pox has disappeared in the institution because of vaccination."

Those who oppose vaccination talk glibly of quarantine and are under the impression that it is not only the best preventive of small-pox, but also that it is comparatively easy to carry out. Perhaps such people, confronted with the evidence above, will say the work here was badly done; but when we remember that it was done in a state where the population is quite equal to the average in intelligence and where the health officers are above the average as to organization and powers, it is easy to see that there are serious drawbacks to prevention of small-pox by quarantine. From the type of men utilized, the personnel of the quarantine cordon must have been above the average. There is a feature of this use of militia that should be recognized. To take some seventy men from their occupations, compel them, not only to carry out strenuous guard duty at an unpleasant time of the year, and put on them the responsibility, not of protecting the flag or defending their homes, but possibly of killing a frightened, half-witted, fellow-man, is no small matter. A quarantine might have been kept up without such sensational accompaniments, but anyone who has seen quarantines in action will know that in practice they are often much more inefficient and much more cruel than in the present instance.

The whole episode is a striking example of the demoralization that affects people who do not know the beneficial effects of vaccination and who are suddenly confronted with one or more cases of small-pox. Small-pox should never be able to spread in a public institution. It is easy to vaccinate all the inmates in such a way as to reduce accidents to the minimum. With general vaccination, as has been shown by innumerable examples, conditions such as described above could not exist. (It is noteworthy, however, that in the same state another institution—one for the insane—also had a severe epidemic of small-pox a few years ago.) Whether the inmates had ever been vaccinated before or not, the indication when the first case of small-pox was recognized was very clear; everyone in the institution, whether patient, employee or workman, should have been vaccinated and the result of the vaccinations carefully followed up; and everybody who visited the institution should have been vaccinated, a record kept of his history and his address, and he should have been examined every few days by a representative of the board of health. As cases of small-pox developed they should have been properly cared for and those exposed vaccinated in turn. In this

way the epidemic would have been cut short without any quarantine, and a lesson would have been given in sane preventive medicine.

This statement is based, not on theory, but on actual practice. The writer has seen small-pox patients admitted by accident to general hospitals many times. General vaccination has always kept it limited to the first patient. The most serious test occurred when a patient was treated during three days as a suspected typhoid-fever case (not an unusual event when small-pox occurs without known exposure). Many physicians, attendants, nurses and medical students handled the patient during the three days, at the same time carrying on their usual activities—some living with their families, others in lodging-houses and eating at large boarding-houses, or in the training school for nurses. As soon as the patient was discovered to have small-pox, everyone known to have been exposed was vaccinated, as also were those with whom they associated outside the hospital, including 4,000 students. Not a single case of small-pox developed, though, aside from the patient, no one was isolated and no quarantine was attempted. Such examples could be indefinitely multiplied by many hospital authorities.

The history of the militiamen shows lack of vaccination knowledge in another quarter. Every member of a military organization should be vaccinated before he begins his duties. All such people should also be vaccinated at the beginning of a campaign, but to vaccinate men who are not obliged to come into contact with small-pox patients in time of peace, make them go through the fatigues and unavoidable traumatism of guard duty, and allow their sores to reach the size indicated above, is not only opposed to the rules of vaccination, but is contrary to the first elements of surgery.

The history of this epidemic throws a light on another phase of antivaccination error. Just as the antivaccinationists idealize the matter of quarantine, so they misunderstand the real nature of small-pox. The common expressions, "Vaccination kills more people than small-pox," "I would rather have small-pox than be vaccinated," can be explained only on the ground of ignorance; but no ignorance regarding such a matter can excuse opposition to vaccination. Under deaths from vaccination are usually included all cases dying from septic diseases any time after vaccination, and if vaccination were applied universally there would be more such deaths than there would be from small-pox, because the small-pox would then be either unknown or so mild as never to be fatal. The deaths from vaccination would be few, indeed, because of greater familiarity in regard to the operation and its after-care. As it is now, among unprotected people, small-pox is a disease of variable severity and has always been known as such. A mild case or epidemic may set up a severe case or a severe epidemic. No one

can count on the disease remaining so mild as it has been for some years over a great part of the country.

Writing in the state where the above-described events took place, I pointed out more than once the certainty of a severe epidemic sooner or later. I also called attention many times to the serious neglect of vaccination in the same state.

This is how the government officers describe the course of events in Michigan in the year of the epidemic in Lapeer<sup>1</sup>:

"In Michigan, in 1909, there had been 1,175 reported cases with only four deaths. During 1910, however, three epidemics occurred in which the mortality rate was high, and in all there were 121 deaths." In Bay City there were 114 cases from March to October, with thirty deaths; in Saginaw 156 cases, with forty-seven deaths; in Lapeer (including the home above alluded to), thirty-eight cases and nineteen deaths. In Saginaw, the report states, all public places of entertainment were closes, and for three weeks the city was under quarantine. From a resident and eye-witness I learn that churches were closed, social calls and even shopping given up; the people were afraid to go into any house for business or pleasure.

When we read the thoughtless expressions of antivaccinationists we often feel as if the best thing to do with them would be to leave them to their folly, but consideration of the statistics shows how unfair that would be. There are the minors who pay a disproportionate toll in such cases. In Saginaw, for example, of the 156 cases, forty-five were under 10 years of age, thirty-five from 10 to 20—more than one-half minors. This shows the supreme selfishness of those who hold that vaccination should be left to the conscience or the complaisance of the individual.

1806 Locust Street.

#### ADHESIONS PRESENTING A SURGICAL COMPLICATION OF PREGNANCY \*

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In considering pathologic conditions existing and demonstrating a more serious aspect to a developing pregnancy, various forms of adhesions may in many different ways play an important part either in a direct or indirect manner; and they may vary in degree of severity in accordance with the density of the fiber or the situation of the organs involved, as we know the density of fibrin formation including the degree of vascular development are resultant in proportion in the majority of cases to the degree of inflammatory

reaction of the parts involved. Formation of adhesions, as generally conceded, arises from the disturbing influence, or to displacement, of endothelium; the irritating influence to the peritoneum being generally mechanical or bacterial in form, an agglutination as a result of fibron exudation occurs between the opposing serous membrane from which definite adhesions are developed as the fibron becomes organized. The delicate meshes thus formed spread out between the viscera and develop into dense bands according to the intensity of the cause, stage of progress of the primary factor, and the location of the involvement. In the same accordance the adhesion formation may early reach its zenith presenting merely a frail veil resulting symptomless, or be absorbed. The denser variety may in various ways present varied symptomatology, dependent upon the organs involved, whether movable or fixed, hollow or solid, and as symptoms are produced in ratio to the obstructive influence of organic functions, almost any degree of agglutination with accompanying anatomical distortion and functional interference with the abdominal viscera may result.

We are all familiar with Nature's wonderful protective process in this fibron agglutination by surrounding infected involved organs or areas, and we fully appreciate the value of the walling off and protecting influence; also its seriousness when the process has been too slow in formation to cope with a rapid pus-forming focus. Nevertheless, empirical as this process must be, we cannot lose sight of many disadvantages it presents as a sequence. For months or even years after an inflammatory process, which may have been of short duration and variable in its virulency but having completely run its course, resulting symptoms of pain or obstructive indications may persevere. In dealing with the subject of adhesions it is not my intention to deal with the exhaustive minutiae of the subject but shall prefer to direct attention to the class most frequently involving areas or organs which through a developing pregnancy may present the first demonstration of their existence, or secondly, aggravate a chain of symptoms previously existing and from their position and influence make continuance of pregnancy a dangerous or improbable possibility. Among the most important organs presenting such complication is the appendix.

In considering pathologic changes during an infective invasion of the appendix, at the first flash of the inflammatory reaction there is found an agglutination of appendix to the nearest adjacent tissue, as an early result of the bacterial invasion into the walls of the appendix. The organ's length, position and direction, bearing importance to later developments, as the inflammatory process becomes more virulent and rapid with pus formation the protective process also increases with greater or less extensive involve-

<sup>1</sup> Small-Pox in the United States, reprint from Pub. Health Rep., No. 63.

\* Read in the Surgical Section, Missouri State Medical Association, Kansas City, May 16, 1911.



ment of intestinal coils, colon, parietal peritoneum, omentum, and may extend to the uterine adnexa or uterus, thus affording ample protection from the general cavity in case of a perforation. While appreciating their protective influence during such a pus-forming focus, and the same unquestionably increasing the security in case of future attacks, on the other hand, the splinting effect may interfere with proper peristalsis and drainage, the mechanical obstructive influence may in various ways tend to stimulate reoccurrence of attacks; again, through the involvement of the adjacent organs, as those in the female pelvis, we can readily see how pregnancy with the gradual enlarging fundus can through traction on the adhesions aggravate or acutely inflame a chronic dormant condition. I have no doubt that the majority of cases of appendicitis occurring in pregnancy wherein the pregnancy can in any way be accused of attributing to the etiology are of this recurrent type of chronic involvement, wherein, through the progressive gestation, irritation is thus set up by tension or adhesions involving the uterine organs, or through pressure of the enlarging uterus upon the cecum or intestines which have previously become constricted through adhesive bands, thus acting as a traumatic etiologic factor.

Case referred by Dr. Thomas, Carthage, Mo., Mrs. C., married 11 years, age 36, unimportant family history. Poor health as a child, becoming robust after establishment of menstrual life at 16. Contracted measles at 20, poor health and general debility since then, with scanty and irregular menstrual history. Has had five children in period of ten years; with vague history of considerable pelvic trouble following each confinement. Present history; general appearance weak and anemic. Absence of menstruation for three or four months, accompanied with constant pain in head. Insomnia for five weeks. Appetite poor with irregular reflex vomiting. Bowels fairly regular, but digestion poor. Urination frequent and painful, urinalysis normal, bladder and rectal examination normal. Patient unable for five weeks to stand on feet on account of increased severity of pain which is almost constant in nature over entire abdomen. Much loss of weight during recent months. Palpation through bimanual examination suggestive of pregnant uterus; however uterus seemed fixed and drawn to right side, apparent mass palpable to the right; severe pain on manipulation, with tenderness and muscular rigidity, making the examination difficult. Continued sensation described as trying to miscarry. Increased severity of symptoms justified incision which was done May 18, 1910, at University Hospital.

Operation revealed pregnant uterus of about three months, lobulated and drawn backward and to the right side by extensive adhesions in the form of dense bands attached to the posterior fundus on the right side, apparently holding the uterus in a fixed cramped position. Adhesions extended to the right including the cecum and right tube and ovary in its meshes. The latter, however, of less density, creating probably little trouble as the tube and ovary appeared otherwise normal. The appendix, involved in dense adhesions, enlarged and congested, macroscopically chronic catarrhal in character, was removed and after freeing adhesions the uterus at once rose up to a normal posi-

tion, demonstrated the degree of traction due to the effects of adhesions.

Care of the uterus through continued application of gauze packs wrung out of hot salt solution, and avoidance of unnecessary manipulation was maintained throughout operation. Incision closed, patient leaving hospital three weeks later after favorable convalescence and complete relief of symptoms.

A recent report from Dr. Thomas states that patient maintained healthy condition throughout gestation and passed through normal and easy confinement Oct. 19, 1910, and at the present time she is in better health than she has known for years.

The degree of seriousness of such a complication involving pregnancy depends greatly upon two factors: First, the rapidity and virulency of the inflammatory process and the time during gestation at which the attack occurs. Second, the failure of early recognition of such with accompanying surgical intervention. An attack may occur and running an apparently short course be left unattended, the advancing pregnancy for reasons above stated will contribute an important factor toward developing a recurrence, and as pregnancy advances the danger of such a complication is more grave, obstructive influence is increased, pressure is increased, the uterus usually forming a portion of the abscess wall, thus rendering more direct septic invasion to the uterine cavity, with resulting serious sequelæ.

In similar manner and through the same aggravating influence of the enlarging uterus of pregnancy various trains of symptoms applicable to the type of adhesion involvement may be produced. Postoperative adhesions, involving the omentum, and peritoneum with the organs lying in the lower segment of the abdomen, may be a complicating factor in a pregnancy occurring a year or so after an abdominal operation, such may occur as an aggravation of a chain of symptoms previously existing, and applicable to the existing adhesions resultant of operation; such symptoms as pain, soreness, intestinal disturbances, etc., may be barely noticeable until increased through tension or pressure of pregnant uterus.

While there still exists septic conditions wherein postoperative adhesions must surely be an ever present accompaniment, it is a creditable fact that such has been reduced to a minimum by improved technic. All surgeons to-day appreciate the importance of covering a raw or denuded surface, the importance of reduced exposure of peritoneum or viscera, the character and temperature of the air, the avoidance of unnecessary sponging or manipulation of the intestinal viscera, increased protection from infection, etc. Ileus we know is a very rare complication of pregnancy, although we know partial obstruction does occur through this mechanical band constriction with a greater or less degree of frequency. It is very probable that in a case of visceral displacement resulting from the enlarging uterus, should there be preexisting bands, greater or less degree of

obstruction with probable strangulation may ensue. While the mortality of such cases is high, such is due to a great extent to difficulties presented in the diagnosis where it is obscured by the advanced pregnancy resulting in deferred diagnosis and surgical aid, the progress of the obstruction may be gradual, thus presenting a less typical picture in respect to clinical symptoms; for instance, pain may be less sudden in its onset and less severe. The vomiting may be slight at first and attributable to various reflex origins, fecal emesis absent, heavily loaded intestines below obstructive point be deceptive through the repeated fecal returns from enemas, distention above point of ileus be unobserved from the general enlargement of advanced pregnancy, the peristaltic wave may be unobservable; thus the clinical picture may in a great many ways be obscure, but a possible history of previous attacks of peritonitis, or history that would lead to suspicion of existing adhesions accompanied with close observation and deduction of the clinical symptoms, recognition of this form of obstruction should generally present no great difficulty before stage of collapse, with possible gangrene of the bowel, has been reached. Early arrival at conclusion and surgical aid is the only salvation for reduction in the mortality. While in some cases days may be required before the circulation is completely shut off and gangrene results, one can never be assured that there is not a rapid interference of the circulation to the constricted portion, resulting in rapid tissue death, or gangrene; mortality is greatly increased where resection of the gangrenous portion is demanded. Therefore, early conclusions and operative steps should be justifiable on any pregnant woman where the typical symptoms point strongly toward this point of obstruction.

Case of Mrs. S. Referred by Dr. Sanders. Married, age 40, two children, one 20 and one 3 years of age. Patient's ill health dates back to birth of first child. Five years later complained of attack which was diagnosed pelvic inflammation, confining her to bed for ten weeks. Gives history of trouble with pelvic organs ever since. Four years ago became pregnant, suffering with severe pelvic pain throughout entire gestation, confined to bed four months during first half.

Present history dates from 29th day of June. Patient began with pain in pelvis, nausea and vomiting. Vaginal discharge of bright red blood, alternating with a mucopurulent discharge, such condition having existed for period of three months. Was seen by Dr. Sanders a month later. Examination revealed apparent inflammatory condition of cervix, offensive discharge with tendency to bleed, with history of rapid loss of weight, with accompanying clinical findings; malignancy was suspected.

On September 6, Dr. Sanders was called to see patient again. Patient had grown much weaker and could hardly talk above a whisper. Pain constant and severe, no temperature, but pulse rapid and feeble. Absence of any flow or discharge for past three weeks. Microscopical section of cervix (examined by Dr. Trimble) proved merely inflammatory. I was called in consultation at this time. Found above clinical symptoms much exaggerated. Patient nauseated and vomiting excessively. Mucoid emesis, slightly suggestive of fecal

stain and odor. Much distention of upper abdomen and diffused tenderness over bladder with constant dribbling urination, which symptom we found had been more or less constant, accompanied with much pain. Obstipation present for several days, with no relief from enemas; however, comparatively little nutrition had been retained for over ten days. With severity of clinical picture exploratory incision was decided upon with diagnosis strongly suspicious of pregnancy, with greater or less degree of intestinal obstruction. Patient was operated upon September 8, at University Hospital. Pregnant uterus exposed after adherent omentum was freed. Omentum adherent over fundus of uterus and anterior peritoneum extending downward toward the right fossa involving the cecum, ileum and appendages on the right side. The ileum was plastered to the posterior surface of the uterus in such a manner that the enlarging uterus caused a partial tension on same, accompanying adhesive bands around the ileum near the cecum acting as a constriction of the intestinal tract at this point. The ileum, while congested and distended, was apparently prevented from complete obstruction at the constricted point by the counter tension of the other adhesions, thus preventing an extensive toxic accumulation in the small bowels. Adhesions were rapidly freed and abdomen closed. Patient's convalescence rapid and uneventful, and was delivered through normal labor by her physician on the 22nd of January. According to her doctor she has gained 30 pounds since that time and been in good health ever since.

Of much importance, in my opinion, are adhesions resulting from previous involvements of the uterine organs. The anatomical variance in adhesion constriction here, as elsewhere, varies chiefly in proportion to the extent of the infection, and to the number and severity of attacks of pelvic peritonitis, most commonly of puerperal origin, intra-uterine infection, or gonorrheal in nature.

Probably most frequently following that type of infection where the parametrium is most extensively involved, such adhesions involve to a greater or less extent the intestinal coils, omentum, uterus and adnexa, and frequently the cecum and appendix. In such cases after absorption or evacuation of the exudate, these adhesions may maintain their density and in keeping with their location maintain organic displacement resulting in chronic symptoms of variable intensity. In case of pregnancy developing, disturbing and painful symptoms will occur in keeping with the remaining consistency of the adhesion bands, and the different organs implicated in their meshes. These adhesions may, in their location create continuous pain from tension upon a fixed retroversion, or from an adherent malposition to one side may develop partial or complete obstruction to the ureter with consequent clinical symptoms.

Case of Mrs. S. referred by Dr. H. H. Lane. Married, age 22. Gives past history of good health. Regular menstruation until about a year ago, when she suffered a miscarriage. Since that time complained of general pelvic trouble until February 9, when Dr. Lane was called to see her. She was taken with severe pain in the right side over McBurney's point; followed by nausea and vomiting, frequent and painful micturition, tenderness diffuse over lower abdomen. Absence of any period for four months, constipated, some temperature,



no chills. Cathartics and hot fomentations prescribed. Suffering continued for two days, symptoms generally increasing in severity requiring opiates for relief. Urinalysis normal. The following day I was called in consultation with Dr. Lane. Found all the clinical findings of a pregnancy of over four months. Patient suffering almost constantly with pain over entire abdomen. Chief point of tenderness located over the region of the appendix extending over the bladder. Right abdominal muscles rigid, patient appeared anemic and completely exhausted. Chief symptom pain, which was constantly localized over right iliac fossa.

Leukocyte count 20,000, urinalysis normal. No tenderness over left kidney or left side in general. Slight tenderness over right hypochondrium which extended slightly to the right kidney, increased over the ascending colon, with chief point of tenderness over McBurney's point. Palpation revealed no mass or enlargement in region of right kidney but some tenderness. Patient moved to the hospital; repeated urinalysis revealing nothing abnormal. Leukocyte count raised to 27,000. Diagnosis of appendicitis followed by operation the following morning. Uterus was found pulled to right side by adhesions attached to the posterior and right side of uterus and apparently rising from below the broad ligament, involving the cecum and appendix. The adhesions were freed and the appendix, although macroscopically normal was removed. No further abnormal condition was apparent, incision was closed. Suspicious of possible ureteral obstruction from pressure, the urine was watched closely following operation. The first sample was scanty, acid in reaction, albumin with abundance of pus present which proved to be staphylococcus and colon bacillus. The latter predominating. Drainage apparently being freely established, the patient was continued on urotropin which had been started immediately upon the recognition of the existing pyelitis, medical application through the ureteral catheter or the use of autogenous vaccine was not deemed necessary or advisable, owing to the freedom from pain and general favorable convalescence.

Recent reports from the attending physician are to the effect that improvement has been general in all respects with the exception of an occasional attack of pain over right side, of short duration, followed by an exaggeration of pus in the urine, which during the intervals disappears entirely. During the past month gestation has progressed normally in every particular with complete freedom from any urinary symptoms.

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#### THE SURGICAL TREATMENT OF THE PARALYSES WHICH FOLLOW ANTERIOR POLIOMYELITIS

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It is generally conceded to-day that the treatment of the paralysis which occurs after anterior poliomyelitis is surgical in nature. It is the purpose of this paper to review briefly the various methods that are in use and to attempt to indicate those methods that seem to be of greatest value. As the treatment of these paralyses falls to the lot of the orthopedic surgeon, it is from his view-point that I shall present the subject, rather than review the work done lately in experimental medicine.

Cases of this paralysis come to the surgeon usually long after the acute stage, and experience

has taught him that this is a regrettable fact. Also he has learned that he must look on the cases not only with a high sense of conservatism, but also that he must select in each case a method of treatment which will promise the best possible return of function to the paralyzed limbs. Several factors must influence him primarily in this selection: first, the importance of the element of time in these cases; second, the significance of the reparative powers of the human organism; and, lastly, the lack of success and disappointment which follows ill-advised, hasty, or incomplete treatment.

No department of surgery has taken greater advantage of the operative opportunities made possible by surgical cleanliness than has that which deals with the defects of gait and movement, nor has any department of medicine had greater opportunities to render assistance to humanity. It seems that there has been neither hesitancy nor lack of enthusiasm in making the most of these chances, albeit to the surgeon who works with these cases there comes the feeling that he is dealing with end-results of a process which should have been fought more rigorously when there was yet a good chance to check its ravages. He feels that he is veritably "locking the stable-door after the horse has gone," and he looks with hope to the laboratory of experimental medicine, where alone the solution can be given; nor is it vain to say that this much-needed and devoutly wished for antidote will soon be forthcoming. Meanwhile, the poor wrecks of function must be salvaged.

The paralysis which follows anterior poliomyelitis is of the flaccid type. It affects the lower more often than the upper extremities. It may be very slight, or very severe. One limb may be involved, or all four, as well as the trunk muscles. The cases range in severity from a very slight paralysis of some of the muscles that move one part, to a complete, flail-like paralysis of all extremities, with serious trunk muscle involvement. Boys and girls are about equally attacked. Passing over the symptoms of onset and those of the acute stage, the pathology, and the treatment needed when the child is ill with the toxemia of the acute disease, let us consider the treatment demanded by the surgical necessities of a case that has survived the acute attack.

After the subsidence of the acute symptoms, and up to the time when it is evident that a so-called fixed, or permanent, paralysis exists, there has been in all these cases a period when surgical measures would have done much. Unfortunately, this is not generally understood, and it is consequently usually neglected. During the early weeks and months of repair these children are allowed to lie in bed with their limbs in positions of deformity; there is dropped foot and

hyperextension of the knee, the limbs may be held adducted, or abducted — usually the latter.

What must be done to prevent this, and why must it be done? The answer is very simple: The limbs must be fixed and supported in positions of non-deformity, and must be maintained in these positions. The reasons for this are the following: The support prevents muscles whose centers in the spinal cord are involved in the process of the disease, from function, thereby giving them the rest required for repair. The

these cogent reasons for the early use of deformity-preventing measures will seem imperative: the early use of proper braces, of plaster-of-Paris splints, or board splints, which hold the limbs in non-deformed positions, will not only prevent the twisting and deforming process, but will most effectively aid in the recovery of the patient.

These paralyzed children, then, should not be allowed to lie in bed waiting for gravity and muscle contracture to deform their limbs, but they should be supported and protected; and with



Fig. 1.—Poliomyelitis paralysis, with slight involvement of one leg. A suitable case for tendon transference.



Fig. 2.—Poliomyelitis paralysis, with uncorrected extreme deformities of both feet, which must be corrected before any further treatment can be used.

fixation in non-deformed positions prevents the stretching of partially paralyzed muscles, which, when stretched, have lost their function. It prevents the stretching of ligaments and joint capsules. Fixation also keeps a sound muscle from contracting, to the injury of its weaker antagonists and itself; and, again, it prevents the soft parts from adapting themselves to positions of deformity.

To anyone who has tried to unravel the causes of a given set of these established deformities,

this they should have daily massage, very gentle at first, and the judicious use of electricity; not that there is any other value in this than that of stimulating the muscles to activity. As the muscles pick up, the efforts should be increased, and active use of the muscles should be begun. Much improvement is usually seen in the first three months, then the improvement is slower and it is found that certain muscles have not regained power. The efforts at the reeducation of these muscles should be carried on carefully



and regularly, and all the time the limbs must be held in positions of non-deformity; meaning by this, the foot at right angles to the leg, the knees straight, and the spine straight if trunk muscles are involved.

This treatment should continue for the first year and a half after the acute attack. Then it may be time to consider some other surgical measure. You may ask what part the surgeon plays in all this. The answer is, that it is his duty to see that these things are carried out; it is his duty to be the instructor of the child's mother, or nurse, in the simple massage which is necessary; he must frequently inspect the limbs and examine them with electricity; he must also keep such apparatus as is necessary in a state of efficiency. Short of this, the mark is missed and the child will not only lose its chances at regaining muscular power in certain muscles, but it will deteriorate into a case which has the deformities of so-called infantile paralysis, which we shall now consider.

Any treatment designed to overcome a deformity must start with an understanding of the causes of the said deformity. A general analysis of the causes of the deformities of the paralysis we are considering shows the following factors to be at work:

1. Gravity.
2. Adaptation due to malposition.
3. A group of strong muscles out-pulling a weak, or paralyzed group.
4. Superimposed weight.
5. The necessity of maintaining body equilibrium.
6. Skeletal changes.
7. The over-stretching of unsupported joint capsules and ligaments.

These factors, which work in various combinations, tend to produce the well-known deformities associated with poliomyelitis anterior.

A case possessed of one or more typical deformities, and one that has long since passed the stage for rapid improvement, demands of the surgeon some active means to accomplish betterment. The surgeon has both operative and non-operative measures, and his success depends on his ability to select and use them both.

*Non-operative treatment* means the ability to design and apply proper mechanical supports which are to be used as braces for the paralyzed limbs, and are to aid in the restoration of function. It means the ability to oversee and direct the developmental side of the after-care, and the power properly to instruct the child and the child's parents.

*Operative treatment.* The operations in use to-day for the relief of these paralytic conditions are the following:

1. Tendon lengthening, by tenotomy and myotomy.

2. The division of contracted fascia.

3. The correction of adaptive skeletal changes by osteotomy.

These three are designed purely and simply for the correction of deformity; they have not for their object the restoration of function.

4. The shifting of power to points of greater vantage by tendon transference.

5. The reinnervation of paralyzed muscles by nerve anastomoses.

These two are designed to reestablish function, or improve function by producing muscle balance.

6. The stiffening of flail joints by arthrodesis.

7. The checking of excess in joint motion by artificial ligaments.

These two are designed to produce stability in a wobbly, or flail limb.

8. The obliteration of antagonist overaction by nerve alcoholization.

All these means lie ready to the surgeon's hand; he needs but little experience with the literature to discover the honesty of the effort to establish the merit, or faults, of any or all of them. He must, however, be able to decide where to use any one of these operations, and he must know the history of each operation in order not to fall into the errors that his predecessors have committed.

The past history of tendon transference is a good illustration. When first done, a strong tendon was cut away from its insertion and stitched to the tendon of a paralyzed muscle. It pulled in the action of the lost muscle, and the result was hailed as wonderful. Many tendons and muscles were shifted in this way before the results began to show that most of the operations were ultimate failures. An investigation showed that the causes of failure were the following: lack of experience with the operation; poor selection of tendons to transplant; too early functional use of the limb after operation; insufficient brace protection; tendons not united under tension; and last, but not least, the absence of after-treatment. Realizing that these faults were those usually associated with haste, enthusiasm and inefficiency, the operators most interested set about improvements. The tendons were given periosteal insertion, under tension. They were anchored to the bone. When short, they were prolonged with silk and the silk inserted into bone, or periosteum. But most of all, cases are now studied with regard to the possibilities of operative success. Tendon-transference is no longer a haphazard tying of tendons together, with the expectation that somehow the case will improve. Before it is undertaken the following points must be dealt with and settled:

1. Any existing deformity must first be corrected.

2. The various relative strength of the muscles must be made out, and the operator must possess a clear idea of what these muscles will do.

3. Tendon-to-tendon grafts must not be used, as the weak tendon will always stretch.

4. The good tendon transferred must be inserted into either periosteum or bone; if short, it must be elongated with silk and given an insertion of mechanical advantage.

5. Muscle tension must be kept up by the implant.

in some muscles, and this in such quantity and in such locality that the operator may be assured that its transference to some other mechanical action will produce an improvement in function.

Next in importance to tendon-transference comes the operation designed to produce reinnervation; that is, nerve-anastomosis. This operation, successfully done, would establish normal muscle balance and normal function. It can, of course, be performed only in cases that have an active muscle group supplied by a nerve, which nerve



Fig. 3.—Poliomyelitis paralysis, with involvement of trunk and both lower extremities. A case which requires the proper application of apparatus.



Fig. 4.—Poliomyelitis paralysis, with extreme paralysis of right lower extremity, flail foot and flail knee. A suitable case for artificial ligaments of silk.

6. *The after-care* is of greatest importance. Fixation must be kept up for three months, then moderate protection use, massage and muscle training.

The careful observance of these things has raised the operation of tendon-transference from the slough of doubt and disappointment to the plane of a highly useful, important surgical procedure. It must be done carefully and followed up closely, otherwise it cannot be a success. It is to be used in cases which possess good power

is accessible to the nerve supplying a paralyzed group. For instance, in the thigh, an isolated paralysis of the quadriceps extensor exists; the anterior crural branch which supplies the rectus has been placed in the obturator nerve and regeneration has followed. Also in the leg, the anterior tibial non-active has been grafted into an active peroneal nerve, and regeneration has followed.

The physiology of these regenerations is an interesting study in itself. Nerve anastomosis



as a surgical procedure is no more difficult than tendon-transference, but it requires for success a certain type of paralysis. It is not as widely applicable as tendon-transference. It has a place in the future development of this part of surgery after it has passed through the same hard schooling that has been given tendon transplantation. It has been supplemented in a few instances by me with a nerve alcoholization of the supply of the stronger group, the idea being that the alcohol temporarily will reduce the pull of the opposing group and give the weaker group a chance at balanced development. This is not mentioned as a well-trying, perfectly sure proceeding, but merely as an aside — it seems to promise an improvement.

For the flail cases and the hopelessly weak cases we have arthrodesis and artificial ligaments of silk, followed by suitable apparatus. Roughly speaking, the idea of operation here is to make stiff props of the legs and thighs, so that the individual walks on his legs as he would on artificial ones. The operation consists of a more or less extensive destruction of the joint, with a resulting ankylosis. It should be restricted to well-grown, strong-boned cases. The fixation of the destroyed joint must be carefully carried out, as, strange to say, motion often results, especially at the knee. The operation has most frequently been done at the ankle; the resulting stiffness has prevented toe-drop, and the gait has been aided. Cases with little or no remaining power are best suited to this operation. Personally, I object to it, as I feel that it is irrevocable and destructive.

Artificial ligaments and tendons of silk have been much employed of late, and with the most pleasing results. The object is to supply check to joint motion by placing silk cords in the position of check ligaments. The silk must be carefully sterilized, and the operative technic must be perfect in order to plant sterile silk in the tissues. A typical operation is that at the ankle, to hold the foot at a right angle with the leg. On the anterior surface of the leg the silk is sutured into the periosetum of the tibia, one strand is passed downward under the annular leg, and out on the dorsum of the foot on the inside; the same with another strand on the outside. The foot is held at a right angle and these strands are sutured to the tarsal periosteum. Small wounds only are needed, tight closure, plaster of Paris for three weeks, then a brace. The advantages of these operations are that they are simple, non-destructive and definite in object. There seems to be an ever increasing variety of things that can be done with these silk stays. Simply put, these operations represent the application of an internal splint, which takes the tension and strength off weak muscles. It is, perhaps, best to look on all operative treatment given these cases as merely a step in the general

attempt. I have passed over the deformity correcting operations without comment, except to say that they are, unfortunately, necessary.

It is on the postoperative treatment, as well as on the pre-operative, that I wish to lay especial stress. These cases are never finished, they may need care and advice for years. Improvements little dreamed of in the first two years after the disease may be gained. Someone is called on to see that these individuals make the most of the power that is left to them, that they spend patient hours of hard work at the task of making the best of what they have. It seems it is the surgeon's task to insist on this, and, indeed, it will require what he himself has of fortitude and endurance, and he may now cheer himself with the knowledge that much of the doubt that has clouded the value of surgical effort has been removed, and that with careful study of his case, its needs and its possibilities, he will be able to offer some means for a decided betterment in function.

Humboldt Building.

#### CUTANEOUS BLASTOMYCOSIS; WITH REPORT OF THREE CASES\*

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The subject of fungus infection, especially of the skin, has had some notable contributions since the year 1894. The discoveries of Gilchrist, Busse and Buschke, Hyde and Montgomery, Montgomery of San Francisco and others, have advanced our knowledge of a class of obscure skin lesions which were previously believed to be either tuberculous, cancerous or syphilitic, and recognized them as a disease not related to any of these but caused by a fungus now known as blastomyces.

Another disease, sporotrichosis, produced by a different fungus, has also been well described clinically, since 1898, by Schenck, Brayton, Hektoen, Perkins, De Beurman, Ramond and others, but this, while proving of great interest and importance, is a different disease clinically and microscopically from the subject of this paper.

To Gilchrist of Baltimore belongs the credit of first demonstrating blastomyces in microscopic sections. The sections were from a lesion which Duhring considered a scrofuloderma. This demonstration was given before the American Dermatological Association in May, 1894. A few months later Busse published an account of a fatal case of pyemia, with cutaneous manifestations and subcutaneous abscesses. In this case he found as pathogenic organism a yeast fungus. Now this case is considered the first discovered

\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911

case of systemic blastomycosis. Since then quite a number of cases of systemic infection have been reported. Dr. Robert G. Washburn<sup>1</sup> places the number at thirty.

Many more cases of cutaneous infection have been reported, until now it is not considered an especially rare disease by dermatologists. This makes it all the more interesting to the family physician as he is generally the first one consulted in regard to these cases. This disease is evidently widely distributed. It is reported from many sections of America and from several countries in Europe. The largest number reported from any one section is from Chicago and vicinity where Drs. Hyde, Montgomery and associ-

same character. The pus is not in the usual quantity and has been well described by some one as of a gelatinous consistence. This lesion does not discharge its contents and heal as is the case in furuncle, but crusts over and involves more skin by extension at the periphery in an irregular manner. This extension continues until in some cases large patches of skin are involved. New lesions may also make their appearance, some distance from the old, with considerable healthy skin separating the patches. The infecting organisms are presumably carried by the lymphatics. These inflamed patches of skin present a characteristic appearance, but they have been taken for atypical cases of tuberculosis of the skin, for car-



Cutaneous blastomycosis. Front view of Case 3.



Cutaneous blastomycosis. Back view of Case 3.

ates have done such excellent work in establishing the identity of the disease. There are without doubt still many unrecognized cases, and for that reason it seemed to me appropriate to bring the subject before the Association. Several cases have been reported<sup>2</sup> from Kansas City, but I know of a still larger number of cases which have been observed but never reported. I have seen enough of these cases to make me believe they are not very rare in Missouri and contiguous states.

The affection usually makes its appearance on the skin as a pimple, or small furuncle. The pain and inflammation are about such as one expects from a boil, but the pus discharge is not of the

cinoma, and for late cases of syphilis. We find a highly inflamed skin, elevated above the surface of the healthy skin about half an inch. It has steeply sloping edges, surface crusted over with numerous minute abscesses in the elevated edge and sometimes over the surface. When the small abscesses have been emptied out and the crust removed the surface is ragged, resembling somewhat a worm-eaten surface of wood.

The microscope should be used to clear up all doubtful cases. The organisms are found in the contents of the small abscesses and also scattered through the affected tissue. The organisms may be seen in the contents of the miliary



abscesses, without staining. by placing on the slide containing the mucopurulent material, a drop of 10 per cent. solution of sodium hydrate. They appear as perfectly round, double-contoured bodies of different sizes, but usually somewhat larger than a red blood-cell.

By careful search budding organisms may be found which will remove any doubt as to what we see. The same bodies may also be seen in stained sections of tissue taken from the edge of the lesion. They are found among the epithelial cells and also in the connective tissue beneath. Giant cells are abundant.

Dr. Frank Hall says of the histopathology of this disease: "It is a granulomatous process presenting the epithelial hyperplasia of carcinoma,



Histopathology of blastomycosis of skin. Case 3.

the giant cell formation of tuberculous and the plasma cell infiltration with the vascular changes of syphilis." The course of the disease is chronic, not infrequently extending over a period of several years. Improvement may take place for a time only, to be followed by a fresh extension and involvement of more tissue. One of the cases we report in this paper seemed to have recovered completely and so remained for a period of four years. It is hard to believe that these organisms lie dormant in the skin for that length of time yet the patient is firmly of the opinion that the later lesions are of the same nature as the former. Some if not all cases of the systemic infection are secondary to the cutaneous disorder.

This makes it extremely important that the disease be properly handled while the infection is limited to the skin. Of thirty systemic cases, only three recoveries are reported with a possible fourth. This shows us the great mortality of the systemic cases, yet the disease if limited to the skin can be successfully treated.

The best means we have for treating this disease is by large doses of iodid of potassium internally, to which may be added any tonic treatment indicated. Locally much benefit is derived from the use of x-ray treatment. Local antiseptics, especially iodine, may be used at the same time. If the lesions are circumscribed and so located as to make it advisable on account of resulting scars, complete excision is to be recommended. Caustics sufficiently strong to destroy the lesions completely may also be used in appropriate cases. The curette may be used, if used thoroughly and followed by cautery to prevent leaving any open lymph or blood-vessels which might be a means of permitting the blastomyces infecting the general system. Whatever means is used should be used vigorously to insure success. Two of the following cases have not been reported until now. The third case was shown at a meeting of the Jackson County Medical Society a few weeks ago.

The first case reported, you will observe, had many other troubles. Her husband is a physician and he did most of the work of caring for her. He was kind enough to write the history for us.

#### REPORTS OF CASES

**CASE 1.**—Mrs. B., age 28 years. History written April 21, 1911. White, American, housewife. Duration of disease between four and five years.

**Family History.**—Father living; age 50; mother died at 43 of typhoid fever. Two brothers living; one healthy; one died by accident. Two sisters living and healthy.

**Previous History.**—Had the usual diseases of childhood. Ischiorectal abscess in 1899 followed by fistula in 1901. Operated for this in November, 1901, and cured. In spring of 1905 was operated for stricture of rectum and two weeks later both tubes and ovaries were supposedly removed. Menstruation still continued, however. Recovery from this operation but six weeks later developed neuritis of musculospiral nerve, right side, with complete paralysis of extensors and drop wrist. Under applications of Paquelin cautery, electric stimulation and general tonics this entirely cleared up.

**Present Trouble.**—About May, 1906, noticed three small pustules on right wing of nose near lower free border. These ulcers itched severely and pained more or less; secreted a grayish-yellow pus and seemed to be filled with a whitish, threadlike substance looking like a small white worm. The three original pustules soon ran together to form an ulcer which rapidly increased in size and began to spread in all directions so that soon the lower two-thirds of nose, from one side to the other, was involved, and also on either side—right side for about an inch, left side from about  $\frac{1}{2}$  to  $\frac{3}{4}$  inch. On right side extended to inner canthus of eye but did not involve conjunctiva. At this time I used hydrogen peroxide to clear up sores, followed by bichlorid of mercury solution, and used aristol as a dusting powder, with the occasional use of solid stick of silver nitrate in an effort to limit the spread of the

disease and to keep down the too abundant granulation. The ulcers soon began to heal but continued to advance. I then put her on small doses of iodid of potassium and Fowler's solution and the trouble seemed to get a little better so that in 1907 the whole thing had apparently healed and remained so for about four weeks. Then a fresh focus developed fully an inch from any of the previous scars and began to spread rapidly down toward the lip on right side. In a short time it slowed up and seemed to heal, but again started up and I took her to Kansas City to see Dr. Wm. Frick. He at once diagnosed the case as blastomycosis of the skin and used the x-ray daily for about a week, when she returned home with the usual result. Sore began to spread rapidly so that in two months the whole right side of upper lip was involved. Lip was enormously swollen, being sore, and secreted a small amount of pus. I again took her to Dr. Frick, who evacuated two or three abscesses and used the x-ray daily for about four weeks; as she had a great deal of faith in iodid I, with Dr. Frick's consent, told her to go ahead on moderate doses (20 grains 3 times a day); under this treatment she got almost well and returned home only to have trouble start afresh. I then put her on increasing doses of iodid, so that she soon was taking 120 grains four times daily, and arsenic to saturation with daily use of x-ray. In a very short time she seemed to get well and with the exception of a slight recrudescence six months later she has been well.

No symptoms have been observed for 18 months or better. In the winter of 1909-10 she developed pulmonary tuberculosis which run her down to about 118 pounds; under treatment she picked up and weighs 165 pounds and disease has shown no symptoms for about a year. Diagnosis confirmed by examination of sputum.

In September, 1910, operated on right ovary and found adherent to coil of intestines; no tubal attachment whatever; evidently an accidental implantation at previous operation.

CASE 2.—Dorothy K., age 6 years. Family history, unimportant; previous history unimportant.

The child had no illness before the beginning of present case. In August, 1910, the child was playing in the back yard of her farm home. While watching the hired man take a scythe, used for cutting weeds, etc., out of a tree the scythe dropped accidentally and struck the child lightly on the head. The scalp was slightly cut causing it to bleed rather freely. This seemed to heal so that the parents considered it well but there remained a sensitive spot at the site of the injury.

Feb. 22, 1911, Dr. E. E. Hubbard was called to see the case and found four patches of inflamed scalp on the left side and apparently a small furuncle just over to the right of the median line, over the parietal bone. The largest of these was about the size of a silver dollar, and was situated at the site of the injury about over the middle of the parietal bone. Two others were about the size of a silver half-dollar and located, one just in front and below, the other just behind and below, the larger lesion. The fourth lesion was just over the mastoid bone and about the size of a silver quarter-dollar. The furuncle-like lesion on the right side was of the same nature as the others but not so far along in development. About two weeks later another of the same kind developed one inch above the pinna of right ear.

These lesions were all elevated, much inflamed and discharging a mucopurulent material which very much resembled the discharge I had observed in other cases of blastomycosis. Dr. Hubbard brought the case to me and we concluded, from the clinical features, the case was one of blastomycosis; this was verified microscopically by finding the blastomyces in the discharge. The case was treated surgically by Dr. Hubbard. Free crucial incisions were made, a light curettage done,

and this followed by thoroughly saturating the lesions through the wounds and around them with tincture of iodine. There was some sloughing but the lesions all healed leaving scars of moderate grade. There has been no return of the trouble, the skin all apparently remaining soundly healed.

CASE 3.—Written Jan. 25, 1911. W. H. Mc., age 41 years. Nativity, Missouri. A patient at the Kansas City General Hospital.

*Family History.*—Father died at the age of 52 years with abscess of the lung due to injury during the war. Mother died at the age of 62 years of typhoid pneumonia. Two brothers died of tuberculosis, both at the age of 24 years. The patient has eight sisters; five of these are dead. One died of tuberculosis, at the age of 31 years; one died in infancy, one died of obstruction of the bowels, and two died at child-birth; three of his sisters are living and healthy.

*Personal History.*—The patient had during childhood, measles, mumps, whooping-cough and spinal meningitis. He has had no sickness of any consequence since childhood except the present skin disease. This disease of the skin first began nine or ten years ago as a boil on the back of his neck. The boil had very little pus in it but would not heal. It extended peripherally on all sides until it became irregular patches involving nearly all the back of the neck. Patient did very little to check it for five years and then was operated upon by a surgeon in Kansas City, Kansas. It was excised and cauterized. Three months later it was curetted and cauterized by a surgeon in Kansas City, Missouri. These operations were repeated at intervals of three weeks to four months until it had been operated on in all ten or twelve times; cutting, burning and curetting. The last of these operations, the patient thinks, was four years ago. At that time he had gall-stones removed, as well as having the skin lesions destroyed at the same time. After this operation the skin appeared to heal completely and remained healed about four years. Two months ago the present lesions began as pimples on the upper part of his breast. These pimples had very little pus in them. About the same time a small boil developed on the right side of back, about the lower edge of scapula, and under the back of the arm when resting at his side. Other pimples extended up over the shoulder, and onto the upper part of the back. Also a band of pimples developed on the neck under the chin running across almost from ear to ear. These pimples coalesced and formed a solid patch which crusted over and presented decidedly raised edges. Close observation showed minute abscesses in the edge of these patches. The pus in these abscesses is sometimes seen to be gelatinous in consistency. This character of pus is another distinguishing feature of blastomycosis. Sections from the edge of one of these lesions show a plentiful amount of the blastomyces in the tissues. The sections made by Dr. Stone of the Hospital showed the characteristic histological structure of the disease. Some of the material taken from the minute abscesses also show the organism in the smear. This patient is a well developed man, five feet and nine and three-fourths inches tall, and with a weight of 168 pounds. His face is rather pale, which I think is due to close confinement to the house. There is no cough and no other indications of tuberculosis. It was thought by many physicians, on account of his having such a decided tuberculous family history, that these lesions were due to tuberculosis. I believe the lesions were at one time taken for carcinoma of the skin, and have also been diagnosed as tertiary syphilis. This latter has been ruled out because the Wassermann test proved negative. This case is a very good illustration of how these unusual cases caused by the vegetable fungi may be mistaken for other things more commonly seen. This patient was treated internally by iodid of potassium, and



locally by excision of some of the lesions, curettement of others, and x-ray treatment of all. He is still under treatment.

For those who may want to study this subject further, we would refer to the modern text-books on dermatology, especially the works of Hyde and Montgomery, Stelwagon and Pusey, also the articles mentioned in the references below:

1. Jour. A. M. A., Vol. 56, p. 1095.
2. The Medical Herald, June, 1906.
3. Referat: Archiv. for Derm. and Syphilis, Vol. 68, p. 415.
4. Jour. A. M. A., June 7, 1902.
5. Jour. Cut. Disease, January, 1903.
6. Jour. Cut. Disease, March, 1904.
7. Jour. A. M. A., Feb. 1, 1902.
8. Jour. Cut. Disease, December, 1904.
9. Kansas City Index-Lancet, October, 1905.
10. Rickets: Jour. Med. Research, Vol. 6, No. 3.
11. Archiv. für Dermatologie und Syphilis, Vol. 77, p. 380.
12. Jour. Cut. Diseases, January, 1903.

### THE OPERABILITY OF UTERINE CANCER \*

From the Gynecological Service of the Barnard  
Free Skin and Cancer Hospital

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ST. LOUIS

There have appeared thus far in American literature only two reports of a large number of cases of uterine cancer operated on by radical abdominal hysterectomy. These two reports were made by Sampson (fourteen cases) and by Reuben Peterson (forty cases). I know that many surgeons have in the last five or ten years been doing this operation, but few of them have a long series of cases in their experience. It has been my good fortune to have seen a rather large number of these cases. The present report is based on twenty-three abdominal or vaginal celiotomies, and of this number eighteen were subjected to the radical abdominal hysterectomy known as Wertheim's operation. I will leave for another occasion the consideration of operative technique, pathologic findings, etc., and devote myself primarily to a consideration of the operability of uterine cancer as revealed by the history, the previous treatment, the operative findings and the subsequent course of my cases.

The first point for the general practitioner to remember in his effort to save patients from uterine cancer is that every woman over 35 years of age with an irregular bloody vaginal discharge should be subjected to a vaginal examination to determine its cause. Early diagnosis is the only means of increasing the number of operable cases. This sermon about early diagnosis has probably been made at every state meeting for the last ten years, and I hope it will be made at every meeting in the years to come until the practitioners of medicine in this state will have

the lesson so drilled into them that mistakes and delay in diagnosis will be the exception instead of the rule.

In the history of these patients, age is an important point in determining operability. It is unfortunately true that the younger the individual attacked by cancer the less likely is she to be an operable case. Particularly the rather stout women who have had many children are subject to the most malignant growing tumors. I hardly recall a case of a stout woman under 35 with an operable cancer of the cervix. On the other hand, women over 55 years of age will often be very resistant to the invasion of the cancerous cells, and in one of my patients, 72 years of age, the cancer had existed for two years previous to my examination and yet was operable, as witnessed by the fact that she remained free of recurrence for four and one-half years.

The size of the cancerous mass is by no means an indication of its inoperability. In the old lady just referred to, and one or two others, the vagina was literally filled with a cauliflower mass and yet these cases proved to be distinctly operable. It is, in fact, characteristic of cervical cancer that the outward growing cauliflower type is much more benign than the inward growing infiltrating type. In determining the operability of uterine cancer, I am especially influenced in my examination by the amount of mobility of the uterus. In the vast majority of instances a cancer existing in a uterus that is still movable is to be considered an operable case. The fact that the cancer has extended to the vaginal wall does not necessarily make it inoperable, nor does an infiltration of the surrounding parametrial connective tissue preclude the possibility of operative relief, provided such infiltration does not extend in a solid mass to the pelvic wall.

And here a word or two as to the character of this infiltration. If there is much tenderness and the infiltration consists of softer connective tissue bands rather than harder nodules, it is quite possible that it is inflammatory and not cancerous. In cancer of the cervix where we have open wounds and many septic microorganisms are present, such an infection of the pelvic connective tissue is very commonly found. It is this fact that should make us cautious before positively declaring that a case is inoperable. I have occasionally seen patients whom I thought inoperable and who proved, after instituting the proper measures for the relief of the associated pelvic inflammation, to be still favorable subjects for a radical operation.

We must also consider the infiltration posteriorly to the rectum and anteriorly to the bladder. Rectal involvement occurs rarely and almost always in very far advanced cases. Involvement of the bladder on the other hand is a question of prime importance, and this primarily because it usually means involvement of the ureteral orifices

\* Read in the general session at the annual meeting of the Missouri State Medical Association, Kansas City, May 16, 1911.

of the bladder. In some patients bloody urine and a dense infiltration along the base of the bladder will give positive evidence of bladder invasion. In most instances, however, a cystoscopic examination of the bladder will be necessary to determine this point. I have made in the neighborhood of forty to fifty cystoscopic examinations in cases of cervical cancer, and have been impressed with the value of such examinations in determining whether or not the case was operable. Not that a positive answer is always obtained. Occasionally we see a direct papillary growth extending through or directly beneath the mucosa; more frequently, however, we see merely pocket formations and bands indicative of an infiltration and fixation of the muscular layer of the bladder. It is also of considerable value to watch the ureteral orifices and note whether the urine comes out in a peristaltic wave. The absence of such a gush of urine is often indicative of infiltration surrounding the pelvic portion of the ureter.

The many points to be considered, therefore, in determining the operability of a particular case make it a matter of considerable difficulty. Even the experienced gynecologist will occasionally have to resort to an exploratory laparotomy and direct palpation of the pelvic contents before deciding the question of whether to go ahead with the removal of the growth or not. "Every operation," as Wertheim states in his recent book on uterine cancer, "must be considered to a certain extent an exploratory laparotomy." In two instances in my own experience the truth of this was impressed on me. In one patient with infiltration of only one-half of the cervix, I found on opening the abdomen metastases in the iliac glands and also high up in the wall of the rectum. In another patient, seen in consultation with Drs. McLean and Marx, metastases were found in both sacral and iliac lymph glands. In both instances radical operation was refrained from, owing to the extent of the metastatic process. It is clear, therefore, that it is no simple matter to decide whether or not a case is operable. The conscientious practitioner will seek the advice of others before dooming the patient to a certain death.

Ten years ago many of our best surgeons declared that they had not seen a single case of cervical cancer which had been cured by operation. Those were the days when simple vaginal hysterectomy was done and the percentage of recurrences was truly appalling. Nowadays with the radical abdominal operation the number of permanent cures, as witnessed by cases watched for over five years, has gone into the hundreds. By means of this operation, cervical cancer can be cured in about one-fifth of all the cases that present themselves for treatment.

The period of observation of my own series of cases is too short, and the number of cases too small, to allow of any conclusions as to perma-

nency of cure. My first operation of this sort was done a little over five years ago and the patient is still alive and feeling perfectly well, although there is a very small recurrence in the vagina. She is now 77 years old and I do not feel justified in performing a secondary operation for the recurrence.

Of the eighteen patients subjected to a radical abdominal operation, seven died as a result of the operation. Five succumbed within the first four days after operation; one died two weeks afterward; and in one patient death resulted from extensive suppuration of the pelvic connective tissue four weeks after the laparotomy. This operative mortality of over 38 per cent. would, under ordinary circumstances, be most appalling. If we remember, however, that Wertheim's primary mortality in his first series of twenty-nine cases was 42 per cent., and that Reuben Peterson had a primary mortality of 48 per cent. in his first fourteen cases, my own figures are correspondingly not so bad. If we divide these eighteen cases into three groups, the early ones, the advanced ones, and the far advanced ones, further light is thrown on this operative mortality.

Group 1. The early cases in which the disease did not extend beyond the uterus numbered three. All recovered from the operation and are at present free of recurrence.

Group 2. The advanced cases in which the disease had extended to the parametrium and vagina but did not yet occlude the ureters or deeply invade the bladder wall numbered seven. Of these five recovered and two died.

Group 3. The far advanced cases showed deeper involvement of the bladder wall or occlusion of one ureter, or extensive infiltration of the vagina and paravaginal tissues. They numbered eight, and five of these patients died. Of the three who recovered from the operation, two died of a recurrence within one year, and I should be much surprised if the third will not likewise terminate fatally.

In view of this experience, I feel that the cases of Group 3 should really have been considered inoperable. Figuring only the certainly operable cases of Groups 1 and 2, numbering ten cases in all, we have an operative mortality of 20 per cent. That, with increased experience, the operator will reduce his primary mortality considerably is generally conceded by all who have done this operation. Wertheim's mortality is now only 10 per cent. My own experience coincides with this, for all of the four cases operated on in the last year recovered.

A few words as to cancer of the body of the uterus. Although much less common, the prognosis of cancer of the uterine body is very much better than that of the cervix. The disease is limited to the uterus for a long time and hence we are justified in doing only a simple vaginal hysterectomy. The three patients on whom I did



this operation for cancer of the uterine body recovered and have thus far remained free of recurrence for periods of one to four years. Practically every case of cancer of the uterine body can be saved by operation *unless there be gross carelessness on the part of the patient or the attending physician.*

And now finally a word as to the percentage of operability in my cases of cervical cancer. I have seen during the last five years in my clinical experience at the Barnard Skin and Cancer Hospital, the Washington University Hospital, the St. Louis city institutions, and in private practice, eighty-eight cases of cervical cancer. Of this number eighteen were subjected to a radical operation, and in eight of these the operative result and the rapid recurrence indicated that they were really not to be classed as operable cases. Thus we have left only ten out of eighty-eight cases that were operable, a percentage of operability of 11.3.

When we read in the reports in the large German clinics that the percentage of operability ranges from 60 to 90, we must indeed be impressed with the fact that conditions are far worse in this country than abroad. The reasons for this marked difference lie partly in the better education of the laity on medical matters in Germany, partly in the careful instruction of physicians abroad in regard to the importance of early diagnosis. These two points have been sufficiently dwelt on by other writers. A third point of almost equal importance is the dilatory method employed by so many of our practitioners. Abroad, practically all cases are sent to the large university hospitals as soon as the diagnosis is made. Here, cases are often treated for a considerable time by caustics. In other instances the physician will do a curettement, either because he does not want to send the case to someone else or because he does not appreciate the fact that the patient can still be saved by a radical operation.

I cannot tell you how many of the cases that came to me for treatment had been subjected to such a palliative curettement early in the disease, at a time when in all likelihood they might still have been saved by a radical hysterectomy. In the three to six months elapsing from the time of this curettement to their first examination by me, the disease had usually advanced so far as to be inoperable.

I appeal to the physicians in Missouri to do their share in promoting early diagnosis and timely operation for uterine cancer. If there are proportionately four times as many operable cases in Germany as in Missouri it is a serious reflection on the medical profession here. We are directly or indirectly responsible for the small number of early diagnoses, and are also responsible for the lack of timely operation. It is not enough merely to make the diagnosis of cancer;

we must at the same time determine the question of its operability.

I trust that in the future greater care will be taken along this particular line and that wherever a physician is in doubt he will not fail to get the opinions of others specially qualified, in whose judgment he has confidence.

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#### AUTOSEROTHERAPY IN TWO CASES OF SUB-ACUTE CEREBROSPINAL MENINGITIS, WITH CURE \*

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This paper is in the nature of a preliminary report on a form of treatment that was used apparently with benefit on two cases of subacute cerebrospinal meningitis in my service at the St. Louis City Hospital in the spring of this year. No positive conclusions are to be drawn, as the number of cases on which the treatment has been tried is so small. Rather, it is hoped that the method will be thought well enough of by those who may read this to give it a trial in order to prove or disprove its value. The course of reasoning that led to the use of the method of treatment developed from the fact that the writer at first looked on Case No. 1 as being a case of infantile paralysis because of the fact that the patient displayed pronounced evidences of myelitis, with clear spinal fluid which showed at the time no organisms; there was an increase of white cells, and a positive increase in protein, as indicated by the butyric acid and the saturated ammonia-sulphate tests.

Flexner has shown that the pathology of infantile paralysis is a perivascular exudate which narrows the lumen of the blood-vessel. The greatest harm results to the portion of the cord where the blood-vessels are most numerous. The spinal fluid is usually under marked tension. Flexner has also shown that the spinal fluid in virulent cases may contain a sufficient quantity of the infecting organism to produce the disease when injected into the brain of monkeys; but usually this is not the case. From these facts it seemed reasonable to suspect that the spinal fluid may at least contain a toxin of the invading organisms. On this basis of reasoning it was planned to do two things, namely: first, relieve the intraspinal pressure by frequent spinal punctures, which would also induce hyperemia of the cord; second, to develop immunity agents by injecting the spinal fluid with its toxins subcutaneously. These measures were not adopted until it seemed that the prognosis was guardedly bad as to life, and apparently undoubtedly bad as to a recovery from

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\* Read in the Medical Section, Missouri State Medical Association, Kansas City, May 16, 1911

the paralysis under the ordinary lines of treatment.

Case 1.—A boy 16 years old was admitted to the hospital with the tentative diagnosis of influenza, or typhoid. There was nothing elicited in the anamnesis that is particularly pertinent to the report, except that he did not know of any possible exposure to acute epidemic diseases. Especial inquiry was made in regard to meningitis. The history of his present illness was about as follows: For a period of ten or twelve days previous to his admission into the hospital he had been complaining of indefinite symptoms, chief of which had been headache, cough, evidences of a mild inflammatory condition of the respiratory passages, diarrhea, followed by constipation, retention of urine for two days or thereabouts and a tendency for his legs to give way, especially when going down stairs. A blood culture and Widal test were made from which we received reports of negative findings. The physical examination revealed the following:

Patient was about 5 feet 7 inches, with a weight of about 155 pounds. Musculature good; hands large and hard; face tanned; skin free from scars, except a few small circular punched-out ones about the legs; scalp and ears were negative; neck slightly rigid; pupils irregular and unequal, the right reacting sluggishly; ocular excursion good; the conjunctival blood-vessels were prominent; slight weakness of right platysma; the mucous membranes of the nose and throat were mildly injected and there existed a trophic rhinitis. Over the chest was heard semi-coarse, semi-dry râles. Heart sounds slightly muffled; accentuation of second aortic; abdomen distended, particularly in bladder region where there was dullness extending nearly to umbilicus. No points of tenderness in abdomen and no abnormal findings of the abdominal organs; penis considerably hyperemic; abdominal reflexes weak; cremasteric weak. Double ankle-clonus; knee-jerk present; left weak; double Babinski sign. There was anesthesia of the legs, hyperesthesia of thighs and muscular weakness of arms and especially of legs. The spinal puncture brought a clear fluid under markedly excessive pressure, which showed on centrifugation, a considerable increase in leukocytes and lymphocytes. No organisms found in smears, and culture from fluid was negative. The temperature of the patient on the day of admission was 104. This gradually fell and reached 100 on the third day. On the fifth day it was observed that there was a complete paralysis of all muscles of both legs save the flexors of the right toes which could be moved a very little. There was much pain and stiffness about the neck and head, and general tenderness to pressure of all muscles. The serum test for syphilis was negative.

All told, spinal puncture was performed five times on dates with the amounts as follows:

March 2, 30 c.c.; March 6, 30 c.c.; March 9, 8 c.c.; March 14, 6 c.c., and March 31, 80 c.c. Seven injections of spinal fluid were made into the subcutaneous tissues as follows: On March 6,  $2\frac{1}{2}$  c.c.; March 7,  $2\frac{1}{2}$  c.c.; March 9, 8 c.c.; March 16, 5 c.c.; April 1, 10 c.c., and April 5, 10 c.c.

The patient left the hospital on his own initiative April 19, showing no effects of his illness, except a slight ankle-clonus and a decubitus. Both were improving at the time. It was apparent that his convalescence dated from March 6, when his second spinal puncture and first spinal fluid injection were made. His improvement had been so marked that the spinal punctures were stopped on the fourteenth and the injections on the sixteenth. Toward the end of the month it began to be noticed that the patient was very positively losing ground, and on spinal puncture it was found that the spinal fluid tension was tremendous—80 c.c. were withdrawn. Three injections were made on dates as given above. Convalescence was gradual from this day on until the patient departed on the nineteenth. He has not been heard from.

Whether the results of this case were because of or in spite of the treatment, I do not know, nor do I pretend to say. But the results had been of such a nature as to cause me to try the same treatment on a second similar case that was referred to my service shortly after the results were obtained in the case above mentioned.

Case No. 2 presented definite symptoms of a cerebrospinal meningitis and gave a history of coming to the United States three weeks previously on the steamship *Martha Washington*, which was reported by the newspapers to have been detained at the quarantine with a number of cases of epidemic cerebrospinal meningitis. It was also learned that the traveling companion of this young man was at the time in the St. Louis contagious hospital with what was believed to be spinal meningitis of the epidemic type.

In this case one spinal puncture was made and a clear fluid under high tension was obtained. The fluid was sterile and showed a great increase of lymphocytes and leukocytes. Three injections of the spinal fluid were made. All symptoms began promptly to clear up and convalescence was uneventful.

#### SUMMARY

Both of these cases had been ill with cough and catarrhal evidences of the respiratory tract about two weeks before evidences of meningitis ensued. The period of illness in each case was characterized by retention of urine, severe constipation, and evidences of a mild cerebrospinal meningitis which, in the first case went on to paralysis, and in the second case might have gone on to paralysis in the absence of the treatment. In both cases the spinal fluid was repeatedly examined for organisms. Blood cultures were also made in



each instance. When the blood and the spinal fluid were incubated for several days, in each case cultures of pneumococci were obtained. In case No. 1, there was a leukocytosis of 20,000 to 30,000 during the course of the disease. Case No. 2 had no leukocytosis.

I cannot entirely rule out the possibility of the laboratory contamination of the blood agar that was used for culture media, as occasionally blood for culturing purposes was obtained from cases that had undiagnosed pneumonia.

Conclusions: Both of these cases were probably mild cases of pneumococcic cerebrospinal meningitis. Apparently good results were obtained in both cases by spinal punctures and subcutaneous injection of the spinal fluid.

From the experience obtained with these two cases it seems that the method might be applicable to slow cases of cerebrospinal involvement, particularly to infantile paralysis, where deformity is likely to result. And as the method will apparently do no harm, if spinal fluid is sterile, or nearly sterile, it should at least be tried.

My thanks are due to Doctors Chaddock and Graves, both of whom repeatedly examined the cases. Both of these gentlemen, I believe, feel that the method of treatment was efficacious. I also desire to thank Dr. J. C. Petit of the intern staff, also Drs. Pfingsten and Marchildon of the visiting staff for the nose and throat and Wassermann examinations, respectively.

Humboldt Building.

#### THE TREATMENT OF GASTROPTOSIS \*

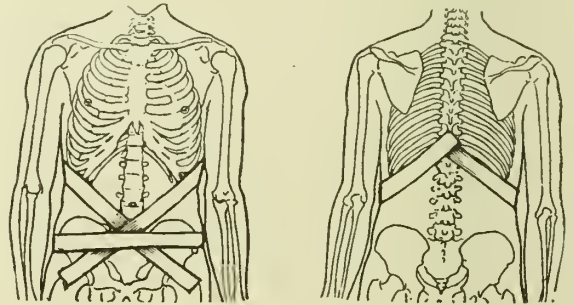
HORACE W. SOPER, M.D.  
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It is impossible to separate the treatment of gastroptosis from that of general visceral ptosis, for in the relaxation of the abdominal walls, which is the primary factor in the development of ptosis, all the abdominal organs participate to a greater or less extent. The enteroptotic habit must be considered as a congenital anomaly, yet not all individuals who present the picture of thin, elongated chests, narrow epigastric angles and vertically placed stomach, are to be classed as enteroptotics, for the reason that their abdominal walls may be well developed and the alimentary tract in a good state of tonus with consequent freedom from functional disturbances. The anatomic type does not always imply pathologic ptosis.

As Cannon<sup>1</sup> has so clearly demonstrated, "tonus," or tonicidity of the neuromusculature of the alimentary canal, is a fundamental necessity for the appearance of normal rhythmic peristalsis.

For the production of tonus we must presuppose a central nervous system of sufficient power to deliver the necessary tonic impulses. The enteroptotic does not possess that sort of nervous system, consequently we have the appearance of symptoms of disturbances of the digestive functions, due primarily to defective innervation. The abdominal muscles become relaxed, the viscera sag downward, and atony of the stomach and colon develops.

The primary object in treatment is not simply to replace a prolapsed organ but to attempt to restore the state of tonus. Therefore our efforts are directed toward the improvement of the patient's central nervous system. His environment and entire mode of life are to be inquired into, and all the various general hygienic measures, such as bathing, exercise, fresh air, proper food, etc., inaugurated. This is necessarily a slow process, but in the very beginning much amelioration may be obtained by improving the relaxed state of the abdominal muscles by the application of a binder or support; large numbers of binders are to be found in the market, but the



majority of them are useless. A binder should support the lowest segment of the abdomen, must be comfortable and not interfere with respiration or bodily movements.

A modification of Rose's adhesive plaster bandage has given me much satisfaction, particularly in thin subjects where abdomens are so depressed that a serious obstacle is presented to the adjustment of a proper support to the displaced viscera. My modification consists in the use of narrow (2-inch) strips. The pubic hair is thus avoided, and much less surface is covered than by Rose's bandage. The patient is therefore more comfortable and enjoys more freedom of movement. The method of applying the bandage is as follows: The patient sits on a couch, the adhesive strip is fastened to the dorsal vertebrae and follows the right lower rib margins; the patient now lies down, the lower abdominal contents are pushed upward with the operator's left hand while the bandage is carried across the abdomen and attached to the left side at Poupart's ligament. The patient again sits up and a second strip is applied to the other side in exactly the same way as the first one. Finally a third strip

\* Read before the St. Louis Medical Society, Nov. 18, 1911.

<sup>1</sup> Cannon, W. B.: Arch. Int. Med., No. 4, 1911, p. 417.

is attached across from one superior iliac spine to the other, the patient lying down. The bandage can be worn comfortably for two weeks. Bathing is not interfered with. It is easily removed by gasoline and benzine, or, as Dr. E. J. G. Beardsley<sup>2</sup> has recently recommended, by oil of wintergreen. The bandage may be reapplied immediately, or in the event that irritation of the skin occurs, an interval of several days may elapse before replacing it.

Special exercises of the abdominal muscles, accompanied by proper breathing, must be at once instituted.

The diet should be as nutritious as possible, but in no class of cases is more individualization required. The food should be adapted to the patient's digestive powers. The common practice of overfeeding with albuminous foods is often deleterious, as many of these patients are particularly liable to proteid intoxication.

In gastric "atony" but little liquid should be taken with the meals. Cold water should be drunk on arising and several hours after eating.

For the constipation, which is usually present, diet, enemata of oil, agar agar and the formation of a regular habit, are our chief reliances. Cathartics upset the peristaltic rhythm and should be avoided.

The indications for surgical intervention are extremely narrow, in fact, strictly speaking, there exists no rational operative treatment for simple enteroptosis. Should a prolapsed kidney become diseased the indications are of course changed accordingly; or should inflammatory processes cause adhesions and kinks with resulting obstructions and hindrances to the passage of contents, surgery becomes a necessity.

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#### TUBERCULIN AS A THERAPEUTIC AGENT

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The employment of some form of tuberculin as a therapeutic agent in certain cases of tuberculosis is rapidly increasing. This increase is due to each of two things: (1) a better and more careful selection of cases; (2) a more thorough knowledge of serum therapy in general by the profession. Unfortunate for both patient and physician is it that tuberculin, because of the lack of knowledge on the part of the profession, was forced to pass through its dark ages. We have, no doubt, lost years of valuable time in our progress toward curing tuberculosis by an inefficient understanding of the realm of usefulness of Koch's discovery. However, tuberculin will never occupy the place among our therapeutic agents that justly belongs to it until the profession

learns to watch carefully the details of its administration, and for the first signs of intolerance. Those who have become proficient in its administration are those who obtain the good results, and are to-day the staunch friends of tuberculin.

To appreciate the potency of tuberculin in therapeutics one must have a clear and systematic knowledge of immunity, toxins and antitoxins; and this associated with a thorough knowledge of the physical condition of his patient will insure him success in treating tuberculosis.

Certainly no one would commit the error of advocating tuberculin to the exclusion of other known and valuable remedies, such as air, sunshine, diet, rest and tonics. I believe that any one who administers, or, if you so choose, experiments with tuberculin carefully, will grant it first place in our general routine treatment of tuberculosis. I say this with a full knowledge of the fact that we have some time-honored and valuable remedies for the disease. Still, where tuberculin is of no value, or, more, where its administration is injurious to a given case, we usually note that the exhibition of other remedies is met with failure. Possibly to be more plain, where tuberculin is contra-indicated the prognosis is grave.

The prime factor in forcing tuberculin into its dark ages was the act of overdosing. The dose of tuberculin can only be given for a given case; and the physician must learn from observation to reckon the dose for the case he may desire to treat. In doing this he must take into consideration the nutrition, nervous stability, and the general physical condition of the individual.

A second factor in forcing tuberculin to slumber through its dark ages was the poor selection of cases for the treatment. It was thought by the pioneers of tuberculin therapy that the more debilitated the patient and the larger the dose the more glorious would be the results.

The fact cannot be sufficiently emphasized that a most careful study of a case must be completed before we suggest tuberculin. In this selection we must determine most accurately the extent of involvement of the affected tissue, the progress of the involvement, the condition of the heart as regards its position, displacement or myocardial changes; whether or not the blood-vessels are sclerosed as the result of the toxins liberated by the tubercle bacilli; if there is any displacement or impairment of function of the diaphragm, either from toxemia, reflex or mechanical disturbances.

We should note the effect of the toxins on the nervous system of the individual, as this furnishes to us a most valuable guide as to the initial dose of tuberculin. It can thus be readily seen that it is very difficult to give any accurate idea as to the exact size of the initial dose. We might say that if one uses B. E. he can well begin with from 0.00005 mg. to 0.0001 mg. and then

2. Jour. Amer. Med. Assn., lvi, 4.



increase the dosage as he sees fit. An ideal treatment would be to administer sufficient dosage at such intervals that would suffice to keep the tissue cells of the patient producing antitoxins all the time.

Until we know more of the chemistry and chemiophysiology and longevity of action and how and when tuberculin is utilized and excreted; until we can bring its therapeutic employment down to a chemical and mathematical basis; we must be guided by clinical symptoms, or, for those who are so inclined, by the opsonic index, and be very careful lest we overdose.

It is fairly well established that the union between toxin and antitoxin is a chemical union, but what is the effect of this union on the organism as a whole? It is of course utopian to hope that we may be able to administer such a dose of tuberculin as to cause the tissue cell to produce an exactly sufficient amount of antituberculin to enter into a chemical reaction with the toxin of the tubercle bacilli existing within the system, without anticipating injury to the organism as a result of this chemical union.

Meakins<sup>1</sup> gives the following as a desirable method for estimating the initial doses of tuberculin: Make the von Pirquet test with various percentages of O. T. in normal salt solution 10 per cent., 25 per cent., 50 per cent. and 100 per cent. Thus, the least amount of tuberculin causing a reaction can be noted. One-fifteenth of the O. T. necessary to cause the minimal reaction will produce, when given subcutaneously, both a general and a local reaction. One-thirtieth of the same amount, given subcutaneously, will produce a local but not a general reaction. One-fiftieth of the minimal cutaneous reaction dose, given subcutaneously, will produce neither local nor general reaction.

The author seems to have attained success in thus estimating the initial dose of O. T. It at least gives us an idea of the susceptibility of our patient.

A factor of vast importance in tuberculin therapy is the frequency of administration. This depends, as does the dosage, on the reactive powers of the patient. It should be attempted, by the physician, to keep the tissue cells of the patient producing antitoxins continuously. Personally I never administer tuberculin more frequently than three times each week; and in some cases once each week. The physician must be guided by the condition of the patient in determining the frequency of administration. After the patient has gained considerably, and is taking a relatively large dose, I lengthen the time of administration to once in two weeks. Of course we can establish no set rule for this and each case demands a separate and distinct consideration. Some writers advise the administration of a small dose over a considerable length of time; increas-

ing the dose only when the patient fails to show a steady improvement. The majority, however, feel that the dose should be gradually increased as the tolerance of the patient increases. This increase must be carefully guarded and at the slightest signs of intolerance the dose must be rapidly decreased. A general reaction is always to be avoided; for once a well-defined reaction is produced the case is very difficult to treat with tuberculin.

During the past eighteen months I have treated about twenty-four cases of tuberculosis with tuberculin, in conjunction with other recognized measures; and in four cases tuberculin alone was used. I used B. E. for the most part, and at times B. F. It is not thoroughly settled yet as to which is the preferable form. I am better qualified to use these and for that reason they were selected.

#### REPORTS OF CASES

CASE 1.—Miss S. H., age 18. Family history unimportant. Was always healthy, with no illness whatever until two months ago, in which time she has lost 14 pounds. Has no appetite. Feels languid all the time. Has shortness of breath upon slight exertion. Extremely nervous. No cough.

Examination: Temperature, a. m. 97.5 F.; p. m. 99 F. Pulse 108. Increased resonance over the apex of the right lung on percussion. On auscultation over the same area are subcrepitant râles. Moro and von Pirquet reactions positive. Urine negative.

Diagnosis: Incipient pulmonary tuberculosis.

Beginning Feb. 1, 1909, she took in all forty-two injections of B. E. beginning with .0001 mg. and gradually increasing. This administration was made three times weekly. On Aug. 1, 1909, she was taking .1 mg. B. E. and .01 mg. B. F. every two weeks. She had gained 18 pounds in weight and remarked that she never felt so well before. The area in the right lung still showed a few subcrepitant râles with a harsh inspiratory murmur. I saw her in June, 1910, and she was still feeling in the best of health.

CASE 2.—Mr. J. E., age 36. Consulted me on Dec. 1, 1909, complaining that for the past month he had enjoyed no appetite, had no energy, had lost 9 pounds, coughed every morning with free expectoration, sweat freely every night after midnight. Mother died of tuberculosis two years before. Patient had no previous illness.

Examination: Infiltration of left apex down to third rib. Sputum contains tubercle bacilli. Temperature, a. m. 98.6 F.; p. m. 100 F. Pulse 110.

Was given B. E. .0001 mg. twice weekly with a very gradual increase in the dose. By March 1 he had gained 4 pounds and was feeling much better. Still had some afternoon temperature and expectorated tubercle bacilli. By June 1 he had gained a total of 8.5 pounds. Was feeling very well. I continued the injections nine months and he gained in all 11 pounds and expectorated no bacilli. Great improvement in the physical signs at the apex. He was then taking 1 mg. B. E. weekly.

CASE 3.—Mrs. M., age 28. Consulted me Jan. 19, 1911, for some trouble with her stomach. Had lost 21 pounds within the past eighteen months. Always feels weak and experiences great dyspnea upon the slightest exertion. Has no appetite and what she does eat seems to lie in her stomach. Very sleepless at night. Coughs some through the day with little expectoration. Family history good.

Examination: At inferior angle of right scapula was an area over which could be obtained a relatively dull

1. Canadian Med. Jour., March, 1911.

note and many crepitant râles. Temperature, a. m., from 97 F. to 98.6 F.; p. m. 99.5 F. Pulse 100. Stomach analysis negative. Gave her .5 mg. O. T. subcutaneously and she gave a slight general and a good local reaction. Moro and von Pirquet positive.

Diagnosis: Incipient pulmonary tuberculosis. She received in all fifty-two injections and is much improved. She has gained 12 pounds and eats and sleeps well. Her stomach trouble has entirely disappeared. A few râles are still present over the affected area. She now takes 1 mg. B. E. weekly.

CASE 4.—Mr. C. S., age 25. Came into my office on Feb. 4, 1911, having a pulmonary hemorrhage. Had been feeling very bad for two weeks. Had lost 8 pounds since Christmas. Has no appetite and very little energy. This was the first hemorrhage.

Examination: Temperature 99.5 F. Pulse 104. Infiltration of left apex down to the second rib. Moro reaction positive.

Diagnosis: Early pulmonary tuberculosis.

He has received B. E. twice weekly in increasing doses. At present he is taking one mg. weekly. Has had no more hemorrhage and has gained 10 pounds in weight and is now doing manual labor. Says he feels better than he has for years.

I wish to mention that each of the preceding cases received the recognized general treatment in conjunction with tuberculin. I will now report four cases where I feel that the improvement was due entirely to the tuberculin.

CASE 5.—Mr. A. C., age 36, attorney. Consulted me on April 23, 1911, for a pain over the lumbar region. He said the pain would begin at about 5 a. m. daily and would continue until after he had taken considerable exercise when it would stop. This pain had been present for about two months. Had noticed it for a short time about one year ago.

Examination: Patient is the picture of health. A rigid examination of all the organs is negative. Find a slight rigidity of the left lumbar muscles. An area of extreme tenderness between the second and third lumbar vertebrae to the left of the spinous processes. Placed him on treatment for rheumatism, using everything I could think of for one month and he grew worse all the time. I then tried the Moro reaction on him and it was positive, pustular eruption, von Pirquet also positive.

He had taken only six injections of B. E., which I now began to give him, when he could notice much improvement. He has taken in all eighteen injections and now notices no pain and at the site of the tenderness is a nodule about the size of a pea; this I suppose is calcareous deposit. The tenderness is absolutely gone.

CASE 6.—Mrs. M. B., age 24, service of Dr. Carver. Family history good. For two years she has been gradually going down. Improve at times then relapse. Has lost much weight in two years. About two months ago she began to have trouble with her bladder wherein she would suffer pain at each urination and for an hour afterward. Slight morning cough with slight expectoration. Had been taking the general treatment for tuberculosis with irrigations daily for the bladder but still grew worse.

Examination revealed a tuberculous infiltration of the right apex. Bladder very sensitive at neck. Urine contained few tubercle bacilli. Moro reaction positive.

She was given B. E. .0001 mg. three times weekly with gradual increase and now she has taken twenty-four injections. She has gained in weight and goes everywhere she desires. The bladder trouble has almost entirely disappeared. Has a good appetite, the first time in two years. Says she sleeps better than she has for some time.

CASE 7.—Mr. R. S., age 29. Consulted me on March 2, 1911, for loss of appetite, general indisposition, slight cough, considerable aching in limbs during every afternoon during the past two or three months.

Examination: Temperature, p. m. 99 F.; a. m. 97 F. Pulse 90. Infiltrated area in right midclavicular line at level of third rib. Physical sign over the area became much exaggerated upon the administration of .5 mg. O. T. von Pirquet reaction positive.

Administered B. E. .0001 mg. three times weekly with increase. Has taken in all fifty-four injections and has gained much in weight and feels greatly benefited. There is still a harsh inspiratory murmur over the affected area.

CASE 8.—Mrs. B., age 26. Mother very low with tuberculosis at present. Patient has been under constant exposure for the past six months. For the past three months she has been feeling awfully bad, with no appetite, slight cough, afternoon temperature and a rapid pulse. I first examined her on May 1, 1911, and found both apices tuberculous. The infiltrations became very obvious under .5 mg. O. T. The Moro and von Pirquet reactions were negative.

She has been taking B. E., beginning with .0001 mg. three times weekly and although she remained under the exposure to tuberculosis, she has made and continues to make a most gratifying improvement.

Cases 5, 7 and 8 received nothing in the way of treatment but tuberculin while Case 6 had not responded to general treatment but began to improve as soon as we began tuberculin treatment. I think we can safely attribute the improvement of each of these to the tuberculin. To me it is a most valuable agent in tuberculosis.

Of the series of twenty-four cases, bad results followed the exhibition of tuberculin in three cases. Two of these were seriously injured by its use. Seventeen of the series were greatly benefited while four remained about the same as when I first saw them.

One feature in the diagnosis of tuberculosis which has been of great interest to me is this: Given a patient who may be classed as normal, pretuberculous or latent tuberculous, if he fails to give the Moro or von Pirquet reaction give him 0.5 mg. B. E. subcutaneously, and then it will be found that the Moro and von Pirquet are positive at the end of three or four days. I have noticed this in several cases, some in whom I have been unable to demonstrate any tuberculous tendency although tuberculosis may develop later. In others I have been able to demonstrate a latent tuberculosis by waiting for its development.

To me this phenomenon means one of two things. First: If it occurs in normal as well as in latent tuberculous cases it proves that the administration of tuberculin causes the tissue cells to produce an antituberculin which then enters into reaction with the tuberculin in the Moro test, giving the reaction; thus proving tuberculin to be the agent to produce an active immunity to tuberculosis. Second: If it occurs only in tuberculosis and not in normal individuals, it may prove that the administration of tuberculin in such dose produces a condition of hypersusceptibility in latent tuberculosis; thus rendering the Moro and von Pirquet tests more delicate. In this light it would be comparable to the Yamanuchi reaction. Further observation, of course, is necessary before we can consider it seriously.



# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

JANUARY, 1912

### EDITORIALS

#### WORKS AND WORDS

The half-day long speech of Mr. John D. Works, senator from California, delivered on the floor of the United States Senate last July, attacking the Owen bill, which provides for the establishment of a department of public health, consisted for the greater part in raising irrelevant issues or in making statements that he declined afterward to substantiate. In that speech the senator, among other things, made extended reference to diseases of which he claimed both he and the members of his family had been cured by Christian Science after regular physicians had treated them in vain.

Such a statement made in the halls of the nation by an accredited representative of the people, who had never exhibited any symptoms of being a humorist, quite naturally aroused some curiosity in various quarters regarding the alleged cures. But when questioned about these things by the Los Angeles County Medical Society and by ex-Senator Chandler of New Hampshire, Senator Works surprised everybody by flatly declining to divulge the names of the physicians who served him, the treatment administered, or the nature of the troubles that encompassed his household. His excuse for this reticence was that he doubted the sincerity of those who desired the information and could not feel sure that they intended to use it fairly or legitimately if they obtained it.

At first sight this position perhaps puzzles, but on reflection the puzzle is How could he have done anything else? There was really no other course open.

But this necessity abates not one whit the gross impudence of his reply, and ameliorates not one whit the stinging affrontery of his shallow subterfuge! An affrontery not only to the intelligence of the members of the Los Angeles County Medical Society, but to that of the voters of his state and of the nation at large.

The sincerity of the senator's position is open to serious question, for his attack is tainted by the sophistries industriously disseminated by the League for Medical Freedom; the arguments incorporated into the address are not new, least of all the recital of fabulous cures; they amount to no more than a marshalling of what have been

the pets of the food adulterators and the medical grafters, lo, these many years — the insinuations concerning the imminent jeopardy that confronts the liberties of the people; the rumors subtly set afloat regarding a mysterious "school of medicine" that lurks somewhere in the shadows waiting to swoop down on this department of public health and carry it off into a Babylonian captivity; these are all the property of the iniquitous coalition whose hand is kept hidden when possible, but which is never laggard in availing itself of all the instrumentalities and agencies which it can suborn to its corrupt and greedy purposes. Their arguments and sophistries are not expected to stand on their intrinsic merits, but are adduced ruse-like for the sole purpose of creating dissension in the ranks of those who otherwise might be expected to affirm the hygienic measures now and again attempted. Of course every make-shift that delays the passage and ratification of the Owen bill and bills like it is hailed with glee by the patent medicinists, the faith curers and all their kind. They reap all the while.

#### PRACTICE OF MEDICINE DEFINED

The Supreme Court of Missouri has just handed down a decision defining and establishing the line of demarcation in medical practice. The decision is in the case of one George F. Smith, who was charged with practicing without a license. The statute thus for the first time clearly construed by the higher court reads as follows:

"SECTION 8311. It shall be unlawful for any person not now a registered physician within the meaning of the law to practice medicine or surgery in any of its departments, or to profess to cure and attempt to treat the sick and others afflicted with bodily or mental infirmities, or engage in the practice of midwifery in the state of Missouri, except as hereinafter provided.

"SECTION 8312. The State Board of Health shall have general supervision over the registration of all practitioners of medicine, surgery and midwifery in this state."

Section 8313, which is extended to some length, provides that all persons who desire to practice medicine as provided in Section 8311 shall appear before the State Board of Health at a stated time for examination; shall furnish certificate that they have passed a grade examination in an accredited school, and shall also furnish satisfactory evidence of having received a diploma from some reputable medical college of four years' requirements at the time of graduation. This is the gist of the section. In ruling the court said: "The practice of medicine is not confined to the administration of drugs; nor is surgery limited to the knife. When a physician advises his

patient to travel for his health he is practicing medicine. Broadly speaking, one is practicing medicine when he visits his patient, examines him, determines the nature of the disease and prescribes the remedy he deems appropriate."

This intelligent construction of the statute by the highest court in the state should be a source of extreme gratification to the people and the medical profession of Missouri; both are deserving of protection from the class of swindlers who play on the miseries of mankind and trade on their distresses, while at the same time they attempt to discredit and strive to defeat the high purposes of the medical guild.

Hitherto the profession has been too wary about demanding the adjudication of these questions, fearing that its efforts would be misconstrued, but it owes something to the citizen and should be quicker to call for correction of evils of this sort by direct appeals to the legislature where the existing law fails to reach the case, and by presentation of test cases where the validity of a statute is in doubt.

The health commissioner of St. Louis has already declared his intention to proceed against the unlicensed practitioners that abound in that city and it is hoped that his example will be followed by the proper officers throughout the commonwealth. Now that the courts have pronounced so distinctly in the matter there can be no real reason why all violations should not be punished as provided for in the statutes.

Let the profession extend its support and encouragement to those members of the state legislature who can be counted on to give these questions unbiased consideration as they come up, and let its attitude toward the hirelings of the fakers, the servants of the nostrum venders, and the corrupted politicians of the medical grafter be unmistakable and unrelenting.

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#### STATE CONFERENCE OF CHARITIES AND CORRECTIONS

The meeting of the State Conference of Charities and Corrections at Kansas City, November 9-11, was as usual the occasion for the getting together of men and women interested in correctional and eleemosynary activities in Missouri; although not so well attended as the Chillicothe meeting in 1910, many good pieces of work were mapped out for the ensuing year.

The committee on the insane, epileptic and feeble-minded, consisting of the superintendents of the state hospitals for the insane, an ex-superintendent, and a specialist in nervous and mental diseases, took a distinct step toward correlating the work of the four state hospitals for the insane.

After a thorough discussion of the various classifications the one proposed by White in his "Outlines of Psychiatry"—which is essentially that of Kraepelin's—was adopted, and an agreement reached whereby the method of examination shall be alike in the four hospitals. Systematic methods of this kind will contribute materially to the collection of reliable statistics concerning the insane in Missouri and, what is more important, will greatly increase the interest in the care of the insane and give directness to the study of methods for the prevention, amelioration and cure of insanity.

At this session of the conference tentative plans were discussed for a meeting of specialists with the superintendents and their assistants in state hospitals for the purpose of studying and classifying the insane. Such meetings will result in enlivening the interest of the house staff of each hospital in the progress of their patients, for we always look more closely at our cases when we know that others also are studying them.

As in past meetings no opportunity was lost to encourage the merit system at the state hospitals. The merit system affords opportunity to the employees for thorough preparation in the work and for continuity of tenure by those who prove their fitness and adaptability; under such a system the patients will receive far better care and treatment than can be administered with present methods of control, since these involve a change of the medical staff of the state hospitals just about the time when the medical officers have attained a degree of familiarity with the management of the institutions and efficiency in the treatment of patients to enable them to obtain the best results. Psychiatry is a special branch of medicine, and hospital management requires training and experience. We must take young men and train them for the work, grading compensation, as in other lines, according to length of service and proved fitness; and the latter qualification always should be the paramount factor.

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#### THE TRUTH ABOUT MEDICINES: A NEW DEPARTMENT

In this issue we begin publishing information about medicines. It is our object to present abstracts of investigations so that the members may learn what new remedies possess sufficient therapeutic value to encourage their use, and on the other hand to expose, as far as possible, fraudulent and worthless preparations so frequently foisted on the profession. Complete reports of the investigations on various products may be obtained at any time by those who wish to learn more than these abstracts will present.

Most of the information under this department will naturally come from the Council on Phar-



macy and Chemistry, and our members should be familiar with the splendid work this branch of the American Medical Association is accomplishing for the safeguarding of the practitioner's interests. We hope the new department will be widely read for it will contain a great deal of information that every member should possess.

The editor will be glad to furnish information concerning any article not mentioned in the abstracts, if request is made.

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### THE MEDICAL LIBRARY AND THE MEDICAL PROFESSION

It goes without saying that the relationship existing between a science and its literature is vital. Without the written record of what has already been accomplished no system of research could ever hope to attain to that degree of completeness which warrants its assumption of the term "Science." Without its *lex scripta* all would be chaos, convulsion and reiterated experimentation; there could be nothing authentic, nothing conclusive.

This applies with great directness in jurisprudence, and indeed in most sciences; but in no realm of human endeavor does it apply so strongly as in the domain of medicine. Here laws are not a mere matter of custom or of taste; they are immutable and universal, not arbitrary but natural, and with them is neither variableness nor shadow of changing. Their proper estimation means conquest, and their appreciation calls for laborious research. It follows then that without a coherent record of what has been heretofore determined, every line of investigation must needs be a circumference and vain repetition.

Inasmuch as the physician's medical culture is conditioned by his familiarity with the literature of his profession, next in importance to the literature itself is its accessibility for those whom it concerns. It must be collected in convenient repositories provided with facilities for its handling and classification.

This literature is so vast (its growth being continuous and immense) that its successful accumulation is beyond the power of one or a few; it can be accomplished only in the larger centers, and then only when the members of the community act with one accord, and there is an amalgamation of individual effort and endeavor.

Where the support of such a movement is half-hearted or is restricted to the generosity of a faithful minority, its progress must needs be slow; and while if the minority behind it be enthusiastic and persistent enough it will *move*, it progresses with uncertainty and its march onward lacks the peculiar dignity that attends institutions fortunate in the possession of numer-

ous supporters whose loyalty is always in evidence. Moving with enforced leisure, it takes longer to reach a given point; and its serviceableness is thus greatly curtailed.

All this is is platitudinous—but it has its application.

Take, for instance, the St. Louis Medical Library. With its accession of 13,300 bound volumes, its current file of 170 domestic medical periodicals, and ninety foreign journals, reinforced as they are by the *Index Medicus*, the Journal Index of *The Journal* of the American Medical Association, and the index maintained by the library, the value of this institution is beyond question; but it has taken nearly eleven years to reach a point of real utility. Its growth has been very much slower than it ought to have been, considering the size of the city and the status of the profession in St. Louis, whereas, had the library been afforded the unstinted support of the local fraternity the institution would have attained its present growth long ago.

The interest of the medical community is solicited in behalf of the library in a larger way, and it is hoped that physicians will see their way clear to rally round this important adjunct to the profession as they have not seen fit to do in the past. The physician enrolling in its membership will find such an investment a saving one.

The remarks dealing with the St. Louis library are not confined to it but apply equally to libraries of other cities, as, say, Kansas City, Springfield and Joplin. This condition of things is extremely unfortunate to say the least, and we hope soon to see the dissipation of this apathy, and in its stead a general living interest on the part of the practitioners in the state toward the medical library.

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### EDITORIAL NOTES

DR. W. D. BARCLAY of Odessa died at his home, November 21, after a short illness from pneumonia.

DR. C. L. HOLLOWAY of St. Joseph had his license revoked by the State Board of Health for a period of five years.

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THE St. Joseph-Buchanan-Andrew County Medical Society has appointed a committee to agitate a movement for the construction and maintenance of a city hospital in St. Joseph.

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DR. CHARLES E. DE M. SAJOUS, the well-known writer, editor, investigator, teacher and physician, has accepted the position of supervising editor of the *New York Medical Journal*.

DR. WILLIAM M. WHEELER, health commissioner of Kansas City, and Dr. D. L. Harris, city bacteriologist of St. Louis, attended the meeting of the American Public Health Association at Havana, Cuba, December 4-6.

THE Springfield Hospital Association has contracted for an addition to the hospital building which will double the capacity of the institution. The new building will be three or four stories, and fire proof. Dr. N. F. Terry is president of the Hospital Association.

PATENT medicine venders and other itinerant "street merchants" will avoid Springfield in the future, for that city has passed an ordinance prohibiting this class of quacks from hawking their wares on the streets. We congratulate the city on this advance step in protecting its people from the deception and frauds of the traveling faker.

THE Missouri State Board of Health has begun a new series of its quarterly bulletin. The first issue appeared in October and contains much information concerning public health matters and statistical data that is of value to physicians as well as laymen. Copies may be obtained by addressing the secretary of the board at Jefferson City.

DR. WAYNE SMITH has been appointed superintendent of the City Hospital at St. Louis in the place of Dr. C. E. Bauer, resigned. Dr. Smith has been superintendent of the Washington University Hospital for a number of years, and undoubtedly will prove an efficient and capable officer in the important position that he has now assumed.

PHYSICIANS in Missouri who are registered pharmacists and desire to retain their right to practice pharmacy in the state should communicate at once with the secretary of the board of pharmacy and renew their licenses; otherwise they may be deprived of this privilege after Jan. 1, 1912. The secretary is Mr. C. E. Zinn, 304 DeGraw Building, Kansas City, Mo.

ST. JOSEPH has started a crusade for clean alleys. At present, alleys in the city of St. Joseph, it is said, are "the dirtiest, filthiest and most unhealthful part of St. Joseph." Undoubtedly unclean and unkempt alleys are a menace to the health of any community. No city or town can afford to permit its people to litter up the alleys and streets with trash and filth. It pays to keep clean.

THE following articles have been accepted by the Council for New and Nonofficial Remedies:

Fermentdiagnosticum (Kalle & Co.).

Crurin Purum (Kalle & Co.).

Crurin Dusting Powder (Kalle & Co.).

Digalen Tablets (Hoffman-LaRoche Chemical Co.).

Sodium Peroxide R. & H. (Roessler & Hasslacher Chemical Co.).

Mercuric Oxycyanide (Merck & Co.).

THE investigation of the charges of mismanagement of the General Hospital at Kansas City has resulted in the complete exoneration of the superintendent, Dr. Luscher, and the staff of physicians and managers. Not only did the physicians who were not members of the staff declare the institution was well managed and properly conducted, but many patients in the institution and others who had been patients offered voluntary evidence showing that the charges were entirely unfounded.

THE St. Louis Society for the Relief and Prevention of Tuberculosis is considering the advisability of establishing several free clinics for the treatment of tuberculosis in different parts of St. Louis. Plans are being laid to consolidate the various civic, trade and professional societies in St. Louis devoting part or all their activities toward the prevention and control of tuberculosis, into one organized body for the purpose of fighting the Great White Plague. Such a step should be consummated, as it will give directness of effort, and centralize activities to much greater effectiveness than has been possible under the present system of separated bodies.

THE committee on cancer of the State Medical Association desires to receive further reports from members concerning the number of cancer cases treated, and has extended the time when these reports may be sent to January 31. Members having cases not already reported are requested to inform the committee on the blanks prepared for the purpose; these blanks may be obtained by addressing the secretary at 3525 Pine Street, St. Louis. The committee is gratified with the large number of replies that were received in response to their first call for this information, and expect to make a good report concerning the prevalence of this disease in Missouri at the next annual meeting.

THE Missouri State Association for the Relief and Control of Tuberculosis has elected George Dock, dean of the Medical Department of Washington University, president of the association,



vice Dr. H. E. Pearce, resigned; Dr. W. B. MacNabb Miller of Columbia, secretary, and Mr. Saunders Norvell of St. Louis, treasurer. Efforts will be made to raise \$1,000 to carry on the work of the organization within the next year, and the legislature will be asked to grant adequate laws to enable the health authorities to enforce proper hygienic and sanitary regulations for the protection of the health of the people. It will be one of the special purposes of the association in the future to disseminate information among the farmers and school children concerning the control of tuberculosis. The headquarters will be at Columbia in the future.

THROUGH the vigilance of the health department of St. Louis a gang of medical swindlers was broken up and their practices stopped before they had done any considerable damage to the health and pocketbooks of their victims. This particular set of fakers confined their depredations to the foreign population. They employed persons familiar with the various languages who visited the quarters of foreigners and announced that a great native doctor had just arrived and would treat their diseases with success and dispatch, and many victims were led to the "consulting rooms" of these sharks. Of course the stool pigeon was a morally weak, avaricious licensed doctor behind whose legal authority to practice they hoped to avoid entanglement with the law, but on information from the health officers the prosecuting attorney issued warrants for their arrest and they are to be tried either for practicing medicine without a license or for obtaining money under false pretenses.

Two convictions of practicing medicine without a license were secured by the Clay County Medical Society in the prosecution of chiropractics at Excelsior Springs recently. The defendants pleaded guilty to fourteen counts and were fined \$200 each; they also dismissed their appeal from a conviction on two other charges. Forty-seven counts against them were dismissed. These persons were defended by a former lieutenant governor of Wisconsin. The money for their defense was furnished, it is said, by a chiropractic college in Wisconsin of which they were graduates. The court paroled them on condition that they would cease their practices in the county.

This is a signal victory for Clay County members, for that district is a regular pest ground of illegal practitioners on account of the traffic in the health resort located in the county. The members of the county medical society are the more to be congratulated for their success in prosecuting these fakers for the health resort

there, as everywhere, is notoriously overridden by grafters and fakers who find easy prey among the credulous and ignorant seekers after health.

THE Society of Medical History of Chicago has recently issued its first *Bulletin*. The society organized for the purpose of preserving in suitable repositories and archives objects having an historic interest in connection with medicine especially of the central and western regions of the United States. The object of the organization is highly commendable. Any communication should be sent to Dr. George H. Weaver, Secretary, 1743 West Harrison Street, Chicago.

The *Bulletin*, which is to appear at irregular intervals, will contain papers read before the society together with other suitable articles. The price to those not members of the society will be about \$3 per volume of 400 pages, more or less.

A few of the articles appearing in the October issue are: "Some American Medical Botanists," Howard A. Kelly; "Early History of the Cook County Hospital," W. E. Quine; "Caricature in Medicine," M. Frank; "Early History of Intubation of the Larynx in Chicago," F. E. Waxham.

## CORRESPONDENCE

### THE THOMAS H. SWOPE SETTLEMENT

KANSAS CITY, Dec. 2, 1911.

To the Editor: The Thomas H. Swope Settlement, which has recently moved into its new home, a gift of the late Thomas H. Swope, was formerly the Franklin Institute and Social Settlement. As one of its departments to aid the many indigent Jews and other poor of the neighborhood, a free medical dispensary was established with a small staff of medical men, who gave daily service at regular hours and answered to necessary sick and obstetrical calls.

Now, with an enlarged plant, a suite of six rooms, in a new though contiguous neighborhood to the former location and with an increase of staff members from five to eleven, we have a very efficient dispensary. To meet the needs of the various adults and children we have specialized to the extent of establishing clinics in medicine, surgery and gynecology, pediatrics, the eye, the nose, throat and ear, orthopedic surgery, and a pathologist to take care of the needed analytic work. A nurse is in daily attendance and goes out on neighborhood calls as directed. It is the purpose of making the medical service a direct help to the social service offered.

To avoid imposition and pauperism a fee is charged for all drugs and dressings furnished. When paid this about covers the "supply bill."

All other service rendered is free and is done at the Settlement. Results seem to prove the need and the value of such service, and the clinical material furnished justifies the time given by the several members of the staff.

SCOTT P. CHILD, M.D.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

[The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.]

### RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

CRURIN PURUM is quinolin-bismuth sulphocyanate approximately  $(C_6H_7N.HSCN)_2Bi(SCN)_3$ . It is a fine, brick-red crystalline powder, with a slight odor of quinolin, insoluble in alcohol and ether. It is decomposed by water. It is said to be antiseptic and antigonorrhoeic. Used topically in gonorrhea, leg ulcers, etc. Kalle & Co., Inc., New York (*Jour. A. M. A.*, Dec. 2, 1911, p. 1838).

CRURIN DUSTING POWDER is a mixture of crurin purum and starch in equal parts, Kalle & Co., Inc., New York (*Jour. A. M. A.*, Dec. 2, 1911, p. 1853).

CIOSE is a water soluble beef protein containing 83 to 85 per cent. actual protein. Occurs in light yellowish-white scales, easily soluble in water. Ciose is designed to augment the protein of any desired diet. It may be added to soups, cereals, vegetables, given in wine, or hot water with salt or condiments. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Dec. 23, 1911, p. 2083).

ENEMOSE is a liquid containing nitrogenous substances from beef and wheat, carbohydrates from wheat and phosphate in a non-coagulable, diffusible and assimilable form. It is designed for colonic alimentation. It is made ready for injection by dissolving 1 volume (a 1 ounce vial) to 4 volumes (ounces) of water. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Dec. 23, 1911, p. 2083).

DIGALEN TABLETS contain  $\frac{1}{2}$  c.c. (8 minims) digalen each. Digalen is described in "N. N. R., 1911." Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Dec. 23, 1911, p. 2083).

### REFORM IN MEDICINES

SULPHUME, a nostrum sold by the Sulphume Company, Boston, Mass., is, according to a report of the A. M. A. Chemical Laboratory, a solution of calcium sulphid such as is obtained when sulphur, lime and water are boiled together. The solution is a rich golden yellow and has the disgusting odor of hydrogen sulphid. Its favorable reception as a "patent medicine" appears to depend on the old idea that anything that is nasty in taste or odor must be "powerfully

good medicine" (*Jour. A. M. A.*, Dec. 2, 1911, p. 1853).

Tiz exploited by Walter Luther Dodge & Co., Chicago, was analyzed by the A. M. A. Chemical Laboratory and found to consist of tablets which contain as essential constituents, alum, tannic acid and salicylic acid. The tablets, dissolved in water, are said to "be good for sore feet." The usual exaggerated and unwarranted claims are made for this well known astringent combination of doubtful value (*Jour. A. M. A.*, Dec. 2, 1911, p. 1853).

IMPORTANT DRUGS. A committee of the Council on Pharmacy and Chemistry reports in regard to the compilation of a list of the more important and useful drugs. With a view of making materia medica instruction more efficient it is proposed that teachers and examiners limit their instruction to the more useful drugs (*Jour. A. M. A.*, Dec. 9, 1911, p. 1930).

C. H. CARSON, QUACK. Some sworn testimony regarding the professional and educational qualifications of this quack are furnished. "Dr." Carson, of Kansas City, conducts the "Temple of Health" for the "Treatment of Disease by the Vital Science System." He defrauds the sick and suffering by selling them slips of tissue paper which by application are supposed to bring about marvelous cures (*Jour. A. M. A.*, Dec. 9, 1911, p. 1930).

MEDICAL JOURNALS AND THE GREAT AMERICAN FRAUD. The *Journal A. M. A.* points out that leading members of the profession are contributors to medical journals whose advertising pages are full of pharmaceutical frauds and humbugs and that because of these contributions these journals are widely read. Because of this support those high in the profession are held responsible for the existence of proprietary frauds (*Jour. A. M. A.*, Dec. 16, 1911, pp. 2000, 2013).

THE ALCOHOL CONTENT OF ELIXIRS. The needlessly high alcohol contents of elixirs was discussed at a meeting of the Washington branch of the American Pharmaceutical Association. The branch regards with disfavor the continuance, in the National Formulary, of preparations that can be used as tipples (*Jour. A. M. A.*, Dec. 16, 1911, p. 2013).

THE DEBARTHE TREATMENT FOR RHEUMATISM. This appears to be a side issue of the Neal Institute which exploits a "three-day liquor-cure." DeBarthe is not a physician. Still he appears to practice medicine and even occasionally to sign death certificates (*Jour. A. M. A.*, Dec. 16, 1911, p. 2014).

PROPRIETARIES—FRAUDULENT AND OTHERWISE. An editorial in the *Journal A. M. A.* discusses the distinction between nostrums and the articles accepted by the Council on Pharmacy and Chemistry. The latter have been found to have some presumable value and to be truthfully advertised. Most proprietaries not accepted have been found to be either fraudulent, worthless or exploited under false claims (*Jour. A. M. A.*, Dec. 23, 1911, p. 2087).

THE NATIONAL LEAGUE FOR MEDICAL FREEDOM. An editorial on the National League for Medical Freedom which opposes public health measures gives an insight into the aims and motives of those most prominent in the league (*Jour. A. M. A.*, Dec. 23, 1911, p. 2091).

NOSTRUMS EXPOSED IN NORTH DAKOTA. Professor Ladd reports on the composition of the following nostrums and condemns them: Toris Compound, Dr. Greene's Improved Compound of Sarsaparilla, Pape's Cold Compound, Calocide Compound, Eilert's Extract of Tar and Wild Cherry and Red Raven (*Jour. A. M. A.*, Dec. 23, 1911, p. 2097).

RADIUM TEAS, one of the latest Paris fads (or fakes) appears to be the exposure to radium emanation while drinking tea or playing whist (*Jour. A. M. A.*, Dec. 23, 1911, p. 2098).



**OXIDAZE TABLETS.** While formerly exploited to the medical profession, oxidaze is now advertised to the public as a "consumption cure." An examination in the A. M. A. Chemical Laboratory, of the stuff as it is now sold shows the tablets to consist essentially of sugar containing a small amount of volatile oils, starch and a trace of potassium iodid (*Jour. A. M. A.*, Dec. 30, 1911, p. 2154).

**NATURAL VS. SYNTHETIC SODIUM SALICYLATE.** The Council on Pharmacy and Chemistry proposes to make a thorough study, chemical, pharmacologic and clinical, regarding the asserted difference in action of "natural" and "synthetic" sodium salicylate. The present contribution is a general discussion by Dr. Torald Sollmann, and a pharmacologic study by J. A. Waddell. Sollmann outlines the claims of superiority made for the "natural" kind and shows that the evidence is most meagre and not applicable to the product now available. The pharmacologic experiments made on rats, cats and rabbits show no difference in action between the "natural" and "synthetic" (*Archives of Internal Medicine*, Dec. 15, 1911, p. 734).

## SOCIETY PROCEEDINGS

### MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI SAINT LOUIS

#### In Memoriam

WALTER WYMAN, M.D.

Surgeon General, Public Health and Marine-Hospital Service, United States of America

Saint Louis  
Aug. 17, 1848

Washington, D. C.  
Nov. 20, 1911

The subject of this memoir, son of Edward and Elizabeth Frances Hadley Wyman, after preliminary schooling in St. Louis, and completing a scientific course at Amherst College, was graduated in medicine from the St. Louis Medical College in 1873. Soon after graduation he was named as intern at the St. Louis Quarantine Hospital, at that time an auxiliary to the City Hospital, but later was transferred to the latter institution as assistant physician, the senior corps there during his first year containing the names of H. C. Dalton, I. N. Love, B. M. Hypes, and Clayton Keith. During his own year of senior service the personnel of the corps varied somewhat, comprising among others, B. N. Torrey, W. A. McCandless and George Homan, the two last named also being seniors.

At the conclusion of his hospital term he began private practice, but an opportunity offered for entering the United States Marine-Hospital Service as Assistant Surgeon, which he embraced October 21, 1876; and, accordingly, was placed in charge of the Marine Hospital in St. Louis. After several years of official duty here he was transferred successively to Cincinnati, Baltimore, New York and Washington, becoming the head of the Service by deserved advancement in May, 1891. The title later was changed from Supervising Surgeon-General to Surgeon-General, while the official name of this Bureau of the Treasury Department became the Public Health and Marine-Hospital Service. The quarantine problems, administrative concerns, and the sanitary and public health duties now devolved on the Service, quite overshadowed all other functions in importance, while laboratory research also became a prominent and most valuable feature of the work of the Bureau.

The professional life of Dr. Wyman compassed both the old and the new in his calling, the dark and the dawn of preventive medicine. It spanned the chasm that parted merely shrewd surmise from assured science as regards the identity and active agents or causes of communicable diseases, for bacteriology was

little more than sheer speculation when Koch's discovery of the *Bacillus Tuberculosis*, hardly more than a quarter of a century ago, started that branch of scientific knowledge on its career of helpfulness and hope to the human race.

It may be truly said of all those anywhere employed in governmental health service at that time that the subject of this memoir showed perhaps the greatest natural talent and the keenest aptitude in divining the bearing of such discoveries on public health; and consequently wisely weaving into national legislation and official regulation the essentials of such advances, thus bringing their fruits into the field of practical utility. It is too often true that public health enactments do not keep abreast of medical discoveries and progress, but it may be said with truth that under the hand and eye of Wyman the Bureau experienced unusual success in this direction, American laws generally being to the front in this respect. The evolution of this Bureau was logical and natural, although jealousies and other difficulties often beset the work, but gradually it came into control of international, national and interstate quarantine operations, the wide investigation of human and animal diseases, and other phases of the varied scientific and medical activities devolved by law on the Service.

In order to achieve results of public value such undertakings must be liberally supported by public funds; and, even in this particular, the record shows that he was a skilled tactician and successful pleader for money with which to carry on the appointed work, the spur of threatened or actual epidemic invasions being sometimes discreetly used to further this end.

But the ever present necessity for persistent pleading and perpetual argument with those in legislative or executive position for means with which to protect health and save life was full of personal pathos to him, and this condition reflected seriously on both the intelligence and humanity of those in power; for, if this man had been a destroyer of human life instead of a savior, if he had maimed or slain on the battle field the same uncountable number of human beings whom his devotion, science and skill saved from suffering and death by disease, what a hero he would be as measured by the standard which a false and brutal civilization now observes! To illustrate: The head of our national government while praising peace between nations on one hand, with the other hand calls for yet more and larger battleships, each one to cost not less than \$10,000,000, while a dole of farthings amounting perhaps to one-tenth of that sum, and less than one per cent. of the annual outlay for human destruction by military means, is allowed for all the vast needs and possibilities of successful warfare against disease, as was planned by this enlightened public official.

It was by the test of such trials and triumphs in this wearing struggle that Walter Wyman proved the faith that was in him and bore testimony to the ability of preventive medicine to-day to thwart the powers and palsy the activities of pandemic infections which within living memory have destroyed millions of human beings in their world-wide sweep.

While holding fast to his citizenship in his native place throughout life, Dr. Wyman was in the best sense of the term a citizen of the world, so broad were his sympathies and interest in the health concerns of his fellowmen. No boundary lines between nations could prevent the spread of the doctrines taught by him from reaching other peoples for their own betterment, nor could the wide oceans keep distant races in ignorance of the good that came from the maritime hygiene which he so ably demonstrated, as applied to yellow fever, cholera, bubonic plague, etc. The honors paid and distinctions conferred on him from foreign sources fully attest this fact; and, besides the evidence of its own results, confirm the value and importance

of what he said and did in our own national domestic sanitation.

On November 24, in Bellefontaine cemetery near the end of a cloudless day the earth closed over all that was mortal of this long tried official, this true and honored friend, but that which was buried was the least part of him, nor will the sun go down on his memory for his works will ever follow him. It was his good fortune to live in an era so quickened with medical and scientific progress that the world never before saw the like; and, largely through his work, the final overthrow of all epidemics seems almost assured. No history of state medicine for his time can be complete without his name being writ large therein, for Walter Wyman was a master builder whose work will continually live and testify to the zeal and knowledge of one who thought and wrought for the sake of suffering humanity and the perpetual good of his fellowmen.

WHEREAS, At a meeting of the Medical Society of City Hospital Alumni on Nov. 23, 1911, called to do honor to the memory of Dr. Walter Wyman, a Committee of three was named to prepare and report a suitable memorial; therefore be it

*Resolved*, That the foregoing memorial, as prepared by the undersigned committee, be recommended for adoption by the Society, and made a part of its records; that a copy be transmitted to the near relatives of our late colleague, and that copies also be given out for publication by the medical press.

GEO. HOMAN, M.D.

W. C. G. KIRCHNER, M.D.

W. S. DEUTSCH, M.D.

Committee.

THIS CERTIFIES that the foregoing memorial was duly adopted by the Medical Society of City Hospital Alumni, Dec. 7, 1911.

W. H. LUEDDE, M.D., President.

Attest:

F. C. SIMON, M.D., Secretary.

#### ROLLA DISTRICT MEDICAL SOCIETY

The Rolla District Medical Society held its seventy-third semi-annual session in the parlors of the Grant House, Rolla, Mo., on Dec. 7, 1911. This is one of the oldest district societies in the state and has done more to raise and uphold the standard of the medical profession in this district as well as to promote harmony among the physicians than any other society. The seventy-third session was the most successful meeting we have held in a number of years. There were present from the district, twenty-one doctors, five honorary members from St. Louis and two from Mankato, Minn. Dr. F. C. Test of Chicago, was a guest of the society. The Rolla physicians had prepared an elaborate banquet for the visitors, which was served in the dining hall of the Grant House at 11 o'clock p. m.

The scientific program was as follows: Dr. Martha Short, "Ophthalmia Neonatorum—Prophylaxis and Treatment." Dr. J. T. Brennan, "Report of a Case of Septic Infection." (Ludwigs Angina.) Dr. R. E. Breuer, "Some Obstetrical Experiences." Dr. S. B. Rowe, "Oration on Medicine." Dr. R. H. Finley, "Oration on Surgery." Dr. Willard Bartlett, "An Experience of Eighty Cases in Which Fractures were Treated by Open Operations." Dr. F. J. Taussig, "Can Uterine Cancer be Cured and How?" Dr. W. G. Moore, "The Physician as a Man." Dr. C. A. Gundlach, "Bronchoscopy, Its Instrumentarium and Demonstration." Dr. E. L. Cooley, "Infectious Arthritis."

The papers were all good and instructive but I would like to make special notice of the papers of Drs. Cooley, Bartlett, Gundlach and Taussig which were of great value to the country doctors who do not

have the opportunity to hear or learn of the newest things in medicine and surgery except when our brothers come from the city and teach us. Then it is like milk and honey to our over-wrought nerves. The talk by Dr. Moore on the "Physician as a Man" was a great treat and fully appreciated.

Officers elected were: President Dr. W. S. Smith, Rolla; vice-president, R. H. Finley, Cuba; secretary-treasurer, W. H. Breuer, St. James. The next meeting will be held in Cuba, June, 1912.

W. H. BREUER, M.D., Secretary.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

##### MEETING OF NOVEMBER 13

The Cape Girardeau County Medical Society held its regular monthly meeting November 13 with the following answering to roll call: Drs. Hays, Howard, Schulz, Wichterich and Wilson.

The program for the evening consisted of a paper by Dr. Schulz on "Proctitis," and one by Dr. Hays on "Typhoid Fever." Both papers were well received and showed that experiences from practice were valuable when discovered in society meetings. The vaccine treatment of typhoid was discussed at length by Dr. Hays and the relation of typhoid fever to the armies of the United States, England, Germany and France, was an interesting phase of the discussion.

After the program, the question was asked, what causes such poor attendance at our medical society meetings when organization has accomplished so much for the profession and the public.

The next meeting will be held on December 11th.

E. H. G. WILSON, M.D., Secretary.

##### MEETING OF DECEMBER 11

The Cape Girardeau County Medical Society held its regular meeting December 11, when the election of officers took place as follows: President, W. E. Yount, Cape Girardeau; vice-president, D. H. Hope, Cape Girardeau; secretary, E. H. G. Wilson, Cape Girardeau; treasurer, W. N. Howard, Cape Girardeau; delegate, H. L. Cunningham, Cape Girardeau; censors, D. H. Hope, R. T. Henderson, B. W. Jackson, and H. L. Cunningham.

After a discussion as to the best means of creating interest in our society, the meeting was adjourned until January 8, 1912.

E. H. G. WILSON, M.D., Secretary.

#### CARTER-SHANNON COUNTY MEDICAL SOCIETY

The Carter-Shannon County Medical Society met at Winona in regular session, at 7:30 p. m. November 14, President Dr. Wm. Fulton in the chair, and the following members present: Dr. P. D. Gum, Dr. John N. Washington, Dr. Frank Hyde, Dr. R. I. Davis; also Dr. A. J. Jamison and Druggists J. T. Loyd and Robt. Jefferis.

After disposing of the routine work, the following new members were elected by the Society: Dr. Edwin G. Cope, Eminence; Dr. A. J. Kroft, Eminence; Dr. Adolphus R. McNeal, Eminence; Dr. Wm. R. Campbell, Grandin.

The following papers were read and discussed: "Operative Procedure in Obstruction of the Bowel in a Young Child," by Dr. J. N. Washington.

"Self Medication," by J. T. Loyd, Ph.G.

"Report on Scarlet Fever," by Dr. P. D. Gum.

At midnight a recess was taken, and the society was served to a nice luncheon by the resident physicians, after which a minimum fee bill was adopted, and the society adjourned.

This meeting of the Carter-Shannon County Medical Society was perhaps the most successful and enjoyable



of any in its history, the total attendance with the new members, exceeding that of any former meeting.

J. A. CHILTON, M.D., Secretary.

### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met at Harrisonville, December 14. This was one of the best meetings that has been held by this society for some time.

The following members were present: Drs. H. A. Brierley, J. B. Brierley, W. F. Chaffin, H. S. Crawford, A. R. Elder, F. B. Ellis, S. W. Fair, D. R. Griffith, E. M. Griffith, H. Jerard, D. S. Long, R. D. Ramey, B. B. Tout, J. S. Triplett, and W. K. Wright. Dr. E. J. Goodwin, of St. Louis, and Dr. H. E. Pearse, of Kansas City, were present as honored guests of the society.

The following program was carried out at 3 p. m.: "The Present Status of Serum Therapy," Dr. H. Jerard. Discussion led by Dr. D. S. Long, on "Vaccine Therapy," and W. F. Chaffin. This was a very excellent paper, and was well received by the society. The next paper was, "Comments of a Country Doctor on Fee-Splitting," by Dr. S. W. Fair. This was freely discussed by Drs. H. A. Brierley, H. E. Pearse, and E. J. Goodwin.

The election of officers for 1912 resulted as follows: President, S. W. Fair; first vice-president, B. B. Tout; second vice-president, J. B. Brierley; secretary-treasurer, H. S. Crawford; member board of censors, A. R. Elder; delegate, H. A. Brierley; alternate, J. S. Triplett.

The following names were recommended by the board of censors and duly elected to membership: L. W. Tandy, E. M. Griffith, A. C. Wunicke, and J. B. Brierley.

At the close of the program, the members were invited to the Hotel Harrisonville, where a nice three-course dinner was served by the members of the local society. After dinner the guests repaired to the parlor where the retiring president, F. B. Ellis, made an address and introduced Dr. E. J. Goodwin, who gave an interesting address on "Medical Organization and Its Benefits to the Physician and to the Public." Dr. H. E. Pearse was then introduced and addressed the society along lines of society work and what had been accomplished by the society. Both addresses were very interesting and instructive, and highly appreciated by the members of Cass County Medical Society.

H. S. CRAWFORD, M.D., Secretary.

### CLAY COUNTY MEDICAL SOCIETY

The regular meeting of the Clay County Medical Society was held at the office of the secretary in Liberty, Mo., on Thursday, Dec. 28, 1911, beginning at 10 o'clock a. m.

Following papers were read: "Appendicitis," Dr. H. E. Pearse; "Acute Articular Rheumatism," Dr. Burt Maltby; "Chronic Articular Rheumatism," Dr. F. H. Matthews; "Rheumatoid Arthritis," Dr. W. H. Goodson; "Gout," Dr. R. E. Sevier.

Discussion opened by Dr. E. H. Miller.

Annual election of officers and delegates to State Meeting.

F. H. MATTHEWS, M.D., Secretary.

### COOPER COUNTY MEDICAL SOCIETY

The Cooper County Medical Society held its regular monthly meeting at Boonville, Dec. 5, 1911, at the Men's Reading Room.

Those present were: Drs. E. L. Rice, J. S. Parrish, C. S. Roberts, F. R. Smiley, and R. L. Evans.

There being no papers, a number of very interesting clinical cases were discussed by all physicians present.

The following officers were elected for 1912: President, E. L. Rice, Pilot Grove; vice-president, F. R. Smiley, Boonville; secretary-treasurer, R. L. Evans, Boonville; delegate, J. S. Parrish, Pleasant Grove; censor, C. S. Roberts.

The next regular meeting will be January 2, at Boonville.

E. L. EVANS, M.D., Secretary.

### DAVISS COUNTY MEDICAL SOCIETY

#### MEETING OF OCTOBER 24

The Daviess County Medical Society held their last meeting at Jameson, Oct. 24, 1911.

Those in attendance were: Drs. D. F. Hanna and M. A. Smith of Gallatin, J. D. Dunham of Pattonsburg, A. G. Minniek of Lock Springs, C. N. Foster of Coffey, and N. M. Wetzel of Jameson.

The doctors met with Dr. Wetzel, who has recently moved into his new residence where he has two well-equipped office rooms adjoining. In honor of the first meeting in their new home, Mrs. Wetzel served 6 o'clock dinner after which the business meeting followed.

There were several papers, one on "Exophthalmic Goiter," by Dr. C. N. Foster, and one on "Eclampsia," by Dr. M. A. Smith, with a discussion by all present. The meeting was a lively one and some strong points were brought out as to causes, treatment and prognosis of these conditions. A goodly number of cases were also reported and commented upon.

The next meeting will be held at Jamesport, Dec. 12, 1911, at which time the annual election of officers will take place. The president urges that every member be present.

M. A. SMITH, M.D., Secretary.

#### MEETING OF DECEMBER 12

The Daviess County Medical Society met in Jamesport, Tuesday, December 12, in Dr. R. V. Thompson's office, with the President, Dr. N. M. Wetzel in the chair.

Dr. F. V. Frazier, of Altamont, Dr. P. V. Thompson, of Jamesport, Dr. S. Hardinger, of Civil Bend, applicants for membership, were received and they were duly elected members of the society.

On motion it was ordered that each member send the secretary on or before January 1, 1912, the subject of a paper he selected to read before the society; at the expiration of the year the committee of censors to report to the society and a vote taken on the best paper written during the year.

Dr. N. M. Wetzel read a very interesting paper on "Sciatica; Etiology and Treatment," which was discussed by every member.

Drs. Brosius and Smith reported interesting cases of amputation and of head wounds, using iodine as the only antiseptic with excellent results.

Committees appointed:

Drs. M. A. Smith, F. V. Frazier on Program and Scientific Work.

Drs. W. L. Brosius and Thompson on Health and Legislation.

Drs. Doolin, Dunham, Minniek, Board of Censors.

The following officers were elected for 1912: President, Dr. N. M. Wetzel, Jameson; vice-president, F. V. Frazier, Altamont; secretary-treasurer, Dr. M. A. Smith, Gallatin; delegate to State Convention, Dr. W. L. Brosius, Gallatin; alternate, Dr. R. V. Thompson, Jamesport.

The next regular meeting will be held at Gallatin in March.

C. E. WALLER, M.D., Reporter.

## GASCONADE-OSAGE-MARIES COUNTY MEDICAL SOCIETY

The Gasconade-Osage-Maries County Medical Society met in Owensville, Thursday, November 16.

The subject of gall-stones and diseases of the gall-bladder received a general oral discussion by all members present.

Dr. E. B. Mankopf, of New Haven, read a paper on "Appendicitis," which received a general discussion.

Dr. E. S. McDonald, of Cameron, read a paper on "Pellagra," with report of a case. This paper was of great interest to all the doctors present and received a liberal discussion.

Dr. William C. Miller, of Labadie, read a paper on "Empyema," with report of a case. This paper also received a very earnest discussion.

Dr. E. L. Haffner, of Hermann, exhibited a pathological specimen of a kidney, from a patient who was suffering with a stone in the pelvis of the kidney which caused hydronephrosis, terminating in pyelitis. The case was orally explained by Dr. Haffner and received a general discussion.

The election of officers for the year resulted as follows: President, Dr. Frederick Aufderheide, Drake; vice-president, Dr. Wm. R. Ferrell, Bland, secretary and treasurer; Dr. John D. Seba, Bland. The next meeting will be in Meta, first Thursday in May.

The society held an open session at night which was liberally attended by the public. Dr. John D. Seba spoke on "The Passing of Sectarian Medicine." Dr. E. S. McDonald delivered a timely talk, "The Doctor as a Man and as a Citizen." Dr. C. A. Bunge, Bland, on "School Hygiene." Dr. E. B. Mankopf, New Haven, on "The Relation of Physician to His Patient." Dr. E. L. Haffner, Hermann, on "The Relation the Laymen Should Hold to Their Family Physician." Resolutions of thanks were passed thanking Drs. Mankopf, McDonald and Miller for their excellent papers read and Dr. Haffner for the pathological specimen exhibited and the people of Owensville for their kind and generous entertainment and Mr. Hennecke for the use of his hall. JOHN D. SEBA, M.D., Secretary.

## GREENE COUNTY MEDICAL SOCIETY

The Greene County Medical Society met in regular session, Friday, December 8, the president, Dr. B. F. Fortner, in the chair. Thirty-eight members were present.

Dr. James M. Buchanan was elected to membership by transfer from the St. Louis Medical Society.

The following resolution having been read at the previous meeting, was adopted at this time:

"Resolved, That there be added a section to Chapter 1, of the By-Laws of this society, to be known as Section 13, and to read as follows:

"No one shall become a member of this society or continue as such who engages in contract practice with any lodge, society or individual, unless he shall receive for services rendered, the regular fee, as per fee bill, established by this Society. Provided that this shall not prohibit an agreement for a particular case, nor apply to examinations for an adequate fee.

"Further, no one shall become a member of this society, nor continue as such, who is guilty of soliciting patronage or obtaining patients by a division of fees or other means of inducing physicians or other persons to bring patients to them for treatment or operation.

"Resolved, That the proposed amendment, if adopted, shall not apply to present contracts, but shall prohibit any extension or renewal of same after Jan. 1, 1912.

"We further recommend that the president of this society appoint from time to time, at his own discretion, committees to use their influence on any man who shall continue this unethical practice, whether he shall be a member of this society or not."

The Greene County Medical Society is endeavoring to raise the standard of medical practice in this city to the high degree of efficiency and dignity to which it is justly due, and the hearty support of this movement by almost the entire membership was shown in the endorsement of this resolution.

The following officers were elected for the ensuing year: President, D. U. Sherman; vice-president, S. W. Tickle; secretary, Thomas O. Klingner; treasurer, D. B. Farnsworth; censor (3 years), W. M. Smith.

THOMAS O. KLINGNER, M.D., Secretary.

## HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at the secretary's office in Fayette, December 1. Members present: Drs. Moore, Wright, T. C. Richards, Dinwiddie, Burgwin, Lee, Givens, Lewis, Champion, Payne and Watts. Visitors, Dr. E. J. Goodwin, Secretary of the State Association, and Rev. Dr. C. W. Tadlock, of Fayette.

There being no papers or clinical cases, the president introduced Dr. Goodwin who addressed the meeting on the subject of the benefits of organization. We were not only edified by his talk but were informed of the aims and objects of the State Association in trying to give real benefits to the practicing physician by virtue of membership in the county and state societies. He spoke of the past obstacles and impediments to the progress of medicine and of how the people were misled by specious and fake advertisements, medical quacks, pretenders and sharks. He told us of the new ruling of the supreme court defining the practice of medicine and urged the society to proceed against all offenders and protect the citizens from the fakery of illegal practitioners. He mentioned the care and caution exercised by the publication committee in admitting advertisements to our JOURNAL and urged the members to support the JOURNAL, and assist in making it interesting and successful. He was asked many questions all of which he answered in a clear and concise manner and all members felt that his visit had been good for the society. We want him to come again.

The Rev. Dr. Tadlock was invited to address the society and responded in a graceful and timely manner. He spoke of the attitude of the layman toward the physician and pleaded for cleanliness in the mind, body and spirit of the physician; he said the laity fully appreciated the service of a doctor who took pains with his patient and made a careful and painstaking examination before venturing an opinion of the cause of the illness, he showed that it is not safe to presume too much on the lack of knowledge of the patient or the family and that frankness, fairness and cooperation with the public were fully appreciated.

A motion extending a vote of thanks to both Dr. Goodwin and Dr. Tadlock carried unanimously.

The secretary reported the following members having paid their dues for 1912: Drs. Wright, Gentle, Fleet, Champion, Givens, Hume, Thompson, White, Williams, Temple, Kitchen, Woods and Watts.

C. W. WATTS, M.D., Secretary.

## HOWELL COUNTY MEDICAL SOCIETY

The Howell County Medical Society met in their regular bi-monthly session in the offices of Drs. Nichols and Elliott, Dec. 14, 1911, Dr. A. H. Thornburgh in the chair.

Officers present: Dr. A. H. Thornburgh, vice-president; Dr. J. H. Elliott, secretary and treasurer.

Members present: Drs. Robert S. Spears, H. C. Shuttee, J. McB. Johnson, E. E. Evans, L. W. Wuesthoff and James H. Elliott.

The essayists for the February meeting are, Drs. H. A. Thompson, Lanton, L. W. Wuesthoff, West Plains,



H. J. Rowe, Willow Springs, each with privilege to choose his own subject.

By unanimous vote of the society, Dr. Robert S. Spears was voted a letter of recommendation to any medical society, as he has long been a devoted member of our society and now goes west for the winter for his health.

The election of officers for 1912 resulted as follows: President, Dr. A. H. Thornburgh, West Plains; vice-president, Joseph B. Cunningham, Pomona; secretary-treasurer, Dr. James H. Elliott, West Plains.

Adjourned till next meeting in February.

JAMES H. ELLIOTT, M.D., Secretary.

#### LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society held its regular meeting at the office of Dr. W. C. Webb, Higginsville, Tuesday, November 14, with the following members present: Drs. Payne and Ryland of Lexington; Harwood of Dover; Carthrae and Moore of Corder; Ott, Braecklein, Webb and McLennan of Higginsville, Schneider, Schreiman and Oetting of Concordia, and Fischer of Alma.

The Secretary, Dr. P. B. Clayton, being absent, Dr. Payne was appointed secretary pro tem.

Dr. Lewis Carthrae, Jr., read an excellent paper on "The Treatment of Gonorrhea," which was lively discussed by most members present.

Dr. Webb read a very instructive paper on "Infantile Paralysis," which was ably discussed by the members who have had personal experience with this disease. The discussion of both papers brought out many valuable points to the benefit of all.

The society was then informed of the death of one of its active members. Dr. Barelay of Odessa, who died of pneumonia Nov. 13 after a very brief illness. The chairman appointed a committee to draft resolutions of respect, extending the society's deep sympathy to the bereaved widow in her hour of sorrow. The society also voted an offering of flowers for the funeral which was held Thursday the 16.

After Drs. McLennan and Harwood were appointed to read papers at the next meeting which will be held in Higginsville, Tuesday, Dec. 12, 1911, the society adjourned.

J. G. W. FISCHER, M.D., Reporter.

#### REYNOLDS COUNTY MEDICAL SOCIETY

At one of our regular quarterly meetings several months ago, at which there is always a good attendance, we adopted our fee schedule, which was a small raise as compared with former prices. The public has already become familiar with our present schedule and we find little or no objection to it.

We have been devoting most of our time to clinical work. At our next regular meeting, which convenes at Centerville, Dec. 15, we will devote most of our time to tuberculous cases, mainly of the hip-joints and extremities. Each member present is to furnish a subject of this type.

Every feature of our society seems to be working in perfect harmony.

T. H. SHY, M.D., Secretary.

#### SALINE COUNTY MEDICAL SOCIETY

##### MEETING OF NOVEMBER 21

The Saline County Medical Society met at Marshall in regular session at 10 a. m., on Tuesday, November 21, President A. E. Gore in the chair.

Communications from the State Secretary were read and discussed, but no formal action was taken. The

name of Dr. G. A. Akins, at Malta Bend, was presented for membership and the rules were suspended and Dr. Akins was elected to membership by acclamation.

There being no further business, the program was called for: "Typhoid, Its Management and Treatment," by Dr. Hall, of Napton. The paper was interesting and instructive; it was pregnant with truths and helpful suggestions. The discussion was largely participated in and was quite interesting.

The program committee reported the following appointments for the December meeting: "Pneumonia; Its Pathology and Diagnosis," by Dr. G. A. Akins, Malta Bend; "Its Treatment," by Dr. Lee I. Shuck, Nelson. The committee further recommended that the meeting in the future be held at 1 p. m., instead of 10 a. m. On motion, the report of the committee was accepted and its recommendation concurred in.

There being no further business the society adjourned to meet at the Court House, in Marshall, December 12, at 1 p. m.

JOHN R. HALL, M.D., Secretary.

##### MEETING OF DECEMBER 12

The Saline County Medical Society met in regular session at the court house in Marshall at 1 p. m., on Dec. 12, 1911, President A. E. Gore in the chair. The name of Dr. Luther James was presented for membership. The rules were suspended and Dr. James was unanimously elected.

The program was as follows:

Dr. Aiken, of Malta Bend, read a very able paper on "The Pathology and Diagnosis of Pneumonia." Dr. Shuck being absent, the president declared the subject, "Treatment of Pneumonia," open for discussion. Dr. Hall, of Marshall, read a paper by Dr. Abraham Jacobi on "The Advances in Treatment of Pneumonia in the Last Century." The paper was much enjoyed by all and the subject was ably discussed by many of the members.

The committee reported the following program for January meeting:

"The Present Status of Serum Therapy," Dr. D. C. Gore of Marshall; "Immunity," Dr. J. R. Hall, of Napton. Discussions: Dr. Aiken, Dr. Tuttle and Dr. James.

There being no further business, the society adjourned to meet January 9, 1912.

J. R. HALL, M.D., Secretary.

#### ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

##### MEETING OF OCTOBER 4

A regular meeting of this society was held on October 4.

The application of Dr. Thos. J. Lynch was voted on, and he was duly elected to membership.

Applications from Drs. C. S. Branson and Frank X. Hartigan were read and referred to the censors.

Dr. R. Wilman read a paper on the "Latest Treatment and Diet in Typhoid Fever."

Dr. F. H. Ladd reported an interesting obstetrical case.

Members present twenty-five.

##### MEETING OF OCTOBER 18

A letter from the Secretary of the State Board of Health was read stating that the trial of Dr. C. L. Holloway is set for October 30, at Jefferson City.

The applications of Drs. Frank X. Hartigan and C. S. Branson were voted on and they were duly elected.

Dr. J. M. Bell read an interesting paper on "Cholecystitis." Discussed by Drs. O. B. Campbell, F. E. Potter and Jacob Geiger. Discussion closed by Dr. J. M. Bell.

Dr. Levi Long read a paper on the "Opsonic Index." Discussed by Drs. T. E. Potter, Jacob Geiger, John

Sampson, O. B. Campbell, P. I. Leonard and C. A. Good. Discussion closed by Dr. Levi Long.

Dr. Charles Geiger called attention to the need of a City Hospital in St. Joseph. It was moved that this society is heartily in favor of a City Hospital for St. Joseph and that a committee of five be appointed to further the accomplishment of this undertaking. The motion carried and the following were appointed on the committee: Drs. Chas. Geiger, O. B. Campbell, T. E. Potter, W. T. Elam and O. G. Gleaves.

Members present thirty-three.

#### MEETING OF NOVEMBER 1

The Committee on New City Hospital reported progress, and on motion the committee was increased to nine members, adding Drs. J. F. Owens, J. M. Bell, E. S. Ballard and P. I. Leonard.

Dr. T. E. Potter read an interesting paper on "Empyema of the Gall-Bladder, with Stones, Complicated with Pernicious Anemia," illustrated with diagrams. This was discussed by Drs. C. H. Wallace, J. M. Bell, L. J. Dandurant, Jacob Geiger, A. B. McGlothlan, L. A. Todd and O. B. Campbell. Discussion closed by Dr. T. E. Potter.

Members present twenty-five.

HERBERT LEE, M.D., Secretary.

The following resolutions were adopted by the St. Joseph-Buchanan-Andrew County Medical Society, Dec. 6, 1911:

WHEREAS, The President of these United States has recognized the importance of more adequate protection of the public health, and has endorsed the plan of reorganization proposed in the bill introduced by Senator Owen, of Oklahoma; and

WHEREAS, The Committee of One Hundred on National Health has called for an expression from organized bodies as to the wisdom of creating a National Department of Health; therefore be it

*Resolved*, That the members of the St. Joseph-Buchanan-Andrew County Medical Society heartily endorse, and pledge their support to the bill introduced in the Senate by Senator Owen providing for a National Department of Health, in charge of a capable medical man who shall be a member of the President's Cabinet.

*Resolved*, That copies of these resolutions be sent over the signatures of all the members of this society, to our United States Senators and to our Representative in Congress for this District, to Prof. Irving Fisher, and to the lay and medical press for publication.

#### STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its annual meeting Dec. 13, 1911, the vice-president, Dr. Wilkins, in the chair.

The application of Dr. George W. Davis, of St. Marys, for membership was laid over until the next meeting as required in the by-laws.

The election of officers for the ensuing year resulted as follows: President, Dr. G. M. Rutledge, Ste. Genevieve; vice-president, Dr. J. A. Wilkins, St. Marys; secretary-treasurer, Dr. R. W. Lanning, Ste. Genevieve; delegate, Dr. F. E. Hinch, Ste. Genevieve; alternate, Dr. J. A. Wilkins; board of censors, Drs. H. J. Morganstern, N. W. Jarvis, and R. W. Lanning.

The president appointed Drs. Hinch, Wilkins and Lanning as Committee on Public Health and Legislation.

No further business appearing, the society adjourned until the second Wednesday in January, 1912.

R. W. LANNING, M.D., Secretary.

#### SCOTLAND COUNTY MEDICAL SOCIETY

The Scotland County Medical Society held its regular monthly meeting on Tuesday, December 12, in the office of the secretary, with the following members present: Drs. Statler, Foster, Platter and Parrish.

A discussion was held regarding physicians over the line in Iowa practicing in Scotland County without a license. One of our members is now in correspondence with the secretary of the State Board of Health concerning this practice.

The following officers were elected for 1912: President, J. L. Statler, Granger; vice-president, A. E. Platter, Memphis; secretary-treasurer, E. E. Parrish, Memphis; delegate to State Association, A. E. Platter; alternate, J. L. Statler.

Last month the members of the Society went to Granger and held a public meeting in one of the churches kindly placed at our disposal, and Dr. G. F. Foster gave an illustrated lecture on tuberculosis, and Dr. Platter a lecture on hygiene of the school, to an audience of one hundred, which greatly appreciated the talks. We intend to carry these lectures through the winter months, as we believe this is the best way for any society to let the laity know we are alive and up and doing. Next month we go to Arbela with the same program. Our society lately purchased a radiop-ticon for the purpose of throwing any picture on a screen. These pictures can be taken from text books, cards, journals, etc. We operate it with a Prest-O-Lite gas tank taken from one of our automobiles, and we believe it is the best investment a society can make when doing this kind of public campaigning.

E. E. PARRISH, M.D., Secretary.

#### VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society, at their meeting December 7, elected the following officers for the year 1912: President, Dr. G. W. Petty; vice-president, Dr. Walker; secretary, J. T. Hornback.

After a short business session, all members retired to State Hospital No. 3, where Dr. Overholser and the hospital staff gave a very interesting clinic on the various forms of insanity.

J. T. HORNBACK, M.D., Secretary.

#### WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in quarterly session at Fordland, Dec. 20, 1911.

Drs. McHaffie, Cantwell, Atkins, Rabenau, Good, Highfill, Beatie, Williams and Bruce responded to roll call.

The applications of Dr. A. C. Ames, of Mountain Grove, and Dr. W. F. Schlicht, of Niangua, were acted upon and received as members.

The following were elected officers for 1912: President, Dr. C. H. McHaffie; vice-president, Dr. D. A. Williams; secretary-treasurer, Dr. John R. Bruce; censor for three years, Dr. W. A. Atkins; delegate, Dr. M. Highfill; alternate, Dr. W. J. Rabenau.

The following papers were read after which there was a full discussion by all members present: "Report of State Meeting," by Dr. W. R. Beatie; "Hydrotherapy," by Dr. A. C. Ames; "Gall-Stones," by Dr. J. W. Good; "Puerperal Fever," by Dr. W. R. Beatie.

The following were appointed to read papers at our March meeting, which will be held at Niangua, March 20, 1912: Dr. Atkins on "Eclampsia;" Dr. Bruce on "Placenta Prævia;" Dr. Williams on "Retarded Labor."

JOHN R. BRUCE, M.D., Secretary.



## BOOK REVIEWS

**A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS FOR STUDENTS, HOSPITAL PHYSICIANS, AND PRACTITIONERS.** By Charles E. Simon, B.A., M.D. Professor of clinical pathology and experimental medicine at the College of Physicians and Surgeons, etc., etc. Seventh edition, enlarged and thoroughly revised. pp. 778. Illustrated with 168 engravings and 25 plates. Philadelphia & London. Lea & Febiger. 1911. \$5.00 net.

This work has already stood the test of six editions in a little over twice as many years. The seventh edition appears with certain important changes. Considerable matter in the former book, which was the accumulation of six editions, not altogether germane to the subject has been cut down in this edition so the author could add an entirely new section without increasing the size. Dr. Simon says: "For several years I have felt that the time had come when our knowledge of the laboratory findings in the various diseases was sufficient to warrant the construction of corresponding laboratory pictures, in which the essential factors bearing on diagnosis could be collected." This is what Dr. Simon has endeavored to do in the second part of the present volume. The work is divided into Parts I and II, embracing Technique and Clinical Pathology, respectively. The first part has been carefully revised, much new material has been introduced. The second part is entirely new.

**DIAGNOSTIC AND THERAPEUTIC TECHNIC.** A manual of practical procedures employed in diagnosis and treatment. By Albert S. Morrow, A.B., M.D. Adjunct professor of surgery in the New York Polyclinic, etc., etc. Illustrated. pp. 775. Phila. & London. W. B. Saunders Co. 1911.

An ensemble of the so-called minor procedures which belong in the domain of the hospital intern and the general practitioner. The work was undertaken in the endeavor to fill the gap left by the text-books which of necessity are confined to the discussion of the more prominent problems of medicine and surgery. The scheme of the book embraces the description of general diagnostic and therapeutic methods and the description of the measures used in diagnosis and treatment of special regional affections.

The procedures are detailed and explicit. Special efforts are taken to render each section complete in itself doing away with cross references. Great care has been given to the selection of the illustrations and these cover all important steps. Only those operative procedures have been considered that constitute a salient feature of measures described. The physician will find this book of great service.

**FOUR EPOCHS OF LIFE.** By Elizabeth Hamilton-Muncie, M.D., Ph.M. pp. 272. Greaves Pub. Co. New York.

The prominent facts of sexual life are given in the form of a story. The book is intended for the young, and handles the subject of sex extremely well.

Many parents who are in a dilemma as to the best method to be pursued in bringing the facts of sex to the attention of their children will find in this book a happy solution of the problem.

## BOOKS RECEIVED

**THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH.** Adapted by H. W. Fowler and F. G. Fowler. authors of "The King's English," from The Oxford Diction-

ary. 8vo. Cloth. pp. 1041. New York, Oxford University Press. 1911.

**CASE HISTORIES IN NEUROLOGY.** A selection of histories setting forth the diagnosis, treatment and post-mortem findings in nervous disease. By E. W. Taylor, A.M., M.D. Instructor in Neurology, Harvard Medical School, etc., etc. 8vo. cloth. pp. 305. W. M. Leonard, Boston. 1911.

**RECENT STUDIES OF SYPHILIS, WITH SPECIAL REFERENCE TO SERO-DIAGNOSIS AND TREATMENT.** Medical Symposium Series No. 1. Second Edition (Revised). A reprint of articles published in the Interstate Medical Journal. Paper, 212 pp. St. Louis: Interstate Medical Journal Co. Price, \$1.00.

**RECENT STUDIES OF CARDIO-VASCULAR DISEASES.** Medical Symposium Series No. 2. A reprint of articles published in the Interstate Medical Journal. Paper 216 pp. St. Louis: Interstate Medical Journal Co. Price, \$1.00.

**LITORA ALIENA,** from the Boston Medical and Surgical Journal. Octavo, 78 pp. W. M. Leonard, publisher, Boston, Mass. Price, 50 cents.

**ELECTRICITY, ITS MEDICAL AND SURGICAL APPLICATIONS, INCLUDING RADIOTHERAPY AND PHOTOTHERAPY.** By Charles S. Potts, M.D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia, with a Section on Electrophysics by H. C. Richards, Ph.D., and a Section on X-rays by H. K. Pancoast, M.D., of the University of Pennsylvania. Octavo, 509 pages, with 356 illustrations and 6 plates. Cloth, \$4.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1911.

**LIPPINCOTT'S NEW MEDICAL DICTIONARY.** A vocabulary of the terms used in medicine, dentistry, veterinary medicine and the allied sciences, with their pronunciation, etymology and signification; including much collateral information of a descriptive and encyclopedic character. By Henry W. Cattell, A.M. (Laf.), M.D. (U. of P.). Editor of International Clinics, Fellow of the College of Physicians of Philadelphia, etc. Freely illustrated with figures in the text. Second Edition. Philadelphia and London, J. B. Lippincott Company. Price, \$5.00.

**THE PRACTICAL MEDICINE SERIES COMPRISING TEN VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY.** Under the general editorial charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Vol. VI. Series 1911. General Medicine. Edited by F. Billings, M.S., M.D., and J. H. Salisbury, A.M., M.D. pp. 353. Price of this volume \$1.50. The series of ten \$10.00. Chicago, Ill. Year Book Publishers.

**THE PRACTICAL MEDICINE SERIES COMPRISING TEN VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY.** Under the general editorial charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Series 1911. Vol. VII. Pediatrics. Edited by Isaac A. Abt., M.D., with the collaboration of M. Michael, M.D. Orthopedic Surgery. Edited by John Ridlon, A.M., M.D., with the collaboration of Chas. A. Parker, M.D. pp. 237. Price of this volume \$1.25. The series of ten \$10.00. Chicago, Ill. Year Book Publishers.

## BOOK ANNOUNCEMENT

The C. V. Mosby Company, of St. Louis, announce the publication of a book on Pellagra, to be ready by Jan. 1, 1912, by Dr. Stewart R. Roberts, of Atlanta, Ga. Dr. Roberts has just returned from Italy where he studied the disease in its natural habitat. He made extensive research regarding the etiology and treatment of Pellagra, and the data contained in the book will reflect the latest and best work that has been done in connection with this disease, making it a reliable guide to those seeking information on the subject.

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EDITOR

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M. A. BLISS, M.D.

### THE ADEQUATE TREATMENT OF SYPHILIS\*

W. T. WOOTTON, M.D.  
HOT SPRINGS, ARK.

Following the usual apology, mention shall be made of the following points concerning syphilis and its treatment:

- Spirochetes, where found and when;
  - agents for exterminating;
- Mercury, effect on system as a whole;
  - on kidneys;
  - on blood-vessels;
  - on gums;
  - on spirochetes;
- administered per hypodermic;
  - per mouth;
  - per inunction;
- dosage;
- saturation of the system; what it means;
  - how accomplished;
  - the effect;
- Salvarsan, as an aid, not as a cure;
- Treatment nearest a *therapia sterilisans magna*;
- Intermittent rather than a continuous treatment;
- Rôle of the iodids;
- The adequate treatment of syphilis;
- Rôle of the resort plus rest, relaxation and elimination.

Just as many cases of luetic infection are sent on to incurability by gross mistreatment as reach that stage by indifference, carelessness and ignorance on the part of the patient. Why? Physicians the country over continue to treat the name instead of the disease. Two drugs are instantly brought to mind at mention of the name — either one or both are prescribed without due thought as to *how* they are to cure. One will cure when administered properly, the other positively will not. The physician's text-book duty is done — and so is the patient, usually. Does not the treatment of syphilis deserve more consideration? Inasmuch as: we have no way, as yet, of

determining *positively* just when our patient has been freed of the last living spirochete; salvarsan alone will not produce a permanent cure; mercury in some form has been used universally in the past and will be in even greater demand in the future. I ask your permission to emphasize the method of administering that drug.

*Spirochætæ pallidæ* are found during the primary stage of syphilis in the initial lesion with a plastic lymph wall surrounding them. When they break through this wall the blood stream is flooded with them and then they penetrate the vessel walls and may be found in any tissue, setting up lesions which are summarized as the secondary stage. Rarely after this do we find them in the circulation to any extent. Now then, to cure syphilis, each and every one of these must be found — and put to death.

This paper contemplates the treatment of the average case of syphilis as soon as a diagnosis is made, whether the patient presents himself during the initial stage or later.

The agents at our command to-day for exterminating the spirochetes are mercury and arsenic. I did not say iodid of potash.

Metallic mercury, *per se*, is not a poison-organotropic, inasmuch as a pint may be drunk at a time with no other inconvenience than the weight would cause. It is highly parasitotropic; is not an irritant; circulates freely in the blood stream as metallic mercury; passes through the capillary walls; bathes every cell and may be found in any and every structure and secretion of the body and recovered from same as metallic mercury. It soon becomes lazy and will hide out in the muscle fibers and a plastic wall be thrown about it if a searcher (iodin) is not kept after it. It does not cause salivation except when gingivitis is not properly prevented, then salivation is secondary to the gangrenous process which means advanced gingivitis.

Rarely do we have renal irritation from metallic mercury, and then transient only. For ten years I have watched for this very carefully, having believed it to be of more frequent occurrence.

\* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Second Annual Meeting, held at Los Angeles, June, 1911.



On the blood-vessels I think we see the worst results and that from imperfect exhibition of the drug. If the blood-vessels have to contend with a foreign substance circulating in and around them continuously month after month with no intermission in which to resume the normal, there is going to be a degeneration and hardening or a protective process. The shorter the course of treatment and the longer the period of rest, the less likelihood of arteriosclerosis.

The effect of metallie mercury on the gums is purely a mechanical one, the globule blocking the lumen of the capillary. If this globule remains there is a distention behind and gangrene in front. Treat it as if emptying a sponge, press or squeeze it between the finger tips and the alveolar process, not continuously, but empty and let it fill up and empty again, and so on, and your so-called salivation will disappear without the necessity of discontinuing the administration of mercury. You cannot rub the gums and expect to empty them any more than you may expect successfully to play a piano without striking the individual keys; therefore, press — do not rub.

At times an eroded mucous membrane of the bowel allows hydrogen disulphid to be absorbed and a sulphate of mercury may be deposited on the lumen of the capillary<sup>1</sup> with consequent irritation and severe griping. Epsom salts most effectively removes the irritation and gripe.

*Spirochæta pallida* cannot and do not live in contact with metallie mercury or when surrounded by lymph or plasma which abound in mercury to the extent of practically being a saturating suspension.

This is *the* method of exterminating them, for you can get this suspension to every cell in the body and unless you have enough of the mercury in the system to saturate, you risk having some foei free from the suspension; your germs here are not stupefied or killed, consequently an early return of symptoms may be expected after elimination of the treatment.

Right here is where the good work should be done — done thoroughly and quickly. Saturation is no harder on your patient but infinitely more severe on the spirochetes. It is a serious mistake to temporize in the treatment of syphilis. The earlier and harder you begin treatment the better your chance of entirely eradicating the germs, for you can now fight them before they have in any measure become immune to your drug. When you hit, hit hard — never stop short of saturation.

Various and sundry are the preparations of mercury — soluble and insoluble — that are recommended for hypodermic use. But can you saturate the system with any of them, or do you only reach the point of toleration just below that

of poisoning and far below that of complete saturation? Is the blood stream a solution of mercury bichlorid, salicylate or other salt? Do the blood and lymph streams carry your syringe-fuls unchanged to all points needed, that the spirochete may be smitten in his lair? If not, what assurance have you that the small amount injected will be properly distributed, and that in time each home will be visited and devastated?

I grant you that the preparation of mercury injected destroys the spirochetes and cures the lesion, when it by chance gets to that lesion, but only too often does it fail to reach all or even one important lesion, and it is missing lesions or foei that causes return symptoms and future trouble.

Of all impossible methods of administering mercury, the oral method ranks first. More false security with latent harm is done by this method than by all others combined. Symptoms may be obscured — and some cases may be benefited — if you are willing to grant that some cases recover spontaneously. The alimentary tract is not tolerant of a sufficient amount to be curative in effect. I believe the protoiodid pill is responsible for a false security which breeds locomotor ataxia in three out of four *treated* cases going on to that preventable and lamentable condition. Whose fault is that?

It may not be a nice method, but in no uncertain manner let me state the injunction method of administering mercury is *the* one to cure syphilis. In no other manner can you possibly exhibit mercury to such advantage: have the entire system full to overflowing at one time (saturated) to feel that wherever there is a spirochete there will the mercury be also and no fear of toxic symptoms. I have small patience with the physician who looks his patient over and calmly tells him he will have to rub for three or six weeks, or for any other fixed time. What has time to do with it, what has a specified quantity of the ointment to do with it unless it be so specified that he is to rub until *saturated*, be it three days or three months? I want to emphasize just here that there is too much cut and dried treatment — too much treating of the name — by stereotyped text-book, albeit erroneous methods. Syphilis is a perfectly curable disease if poor treatment does not render it incurable. We have always had the means at hand to cure, but familiarity has bred contempt — or rank carelessness.

The method in vogue at Hot Springs is: A bath of sufficient duration and intensity to cause a mild reaction — a light sweat — and just as the patient cools, the attendant begins the rub, using the back for the purpose as little or no hair is encountered in that region. This should be done in a fairly warm room (as "goose flesh" is not conducive to good absorption), continued not longer than twenty minutes, as by this time the

1. The same process may take place in the mouth, causing gingivitis, and may be relieved by pressure of finger as for the globule.

skin will have received all the mercury it can hold at one time and further rubbing merely macerates the skin. The ointment not taken up by this time is left on the back and a shirt put on over it. Absorption takes place from it just as soon as the skin is unloaded by the lymph and blood streams. This is continued daily to saturation when the eliminating baths begin. Small doses (10 to 30 gr. daily) of potassium iodid are given with the administration of mercury to keep it at work, and continued ten days or two weeks after discontinuing mercury to ensure elimination.

The objection is raised that you cannot carry this out at home. Well, you can come very close to it and do far more for your patient than when you give him a box of protoiodid pills or a bottle of mixed treatment. Eliminate the mercury shirt if you want to but make him rub, rub till saturated—not till then is your or his duty done. Better by far call in your chauffeur and make a mercury rubber for your patients than let said patients wander about with a nondescript treatment only reporting to you when they do not see smooth sailing.

There are many little niceties that may now be allowed the "esthetic unfortunate" that were formerly thought impossible. In a series of tests I have demonstrated that metallic mercury rubs out of its base, leaving the suet, lanolin or vaselin on the skin.<sup>2</sup> Starting with a dram and a half of the 50 per cent. ointment after a twenty minutes' rub, the residual ointment showed 18 per cent. mercury only, a loss of 28.8 gr. It was noted that the amount of mercury rubbing out was very materially decreased when a preliminary hot bath was not taken. Now this mercury did not vaporize for the patient became saturated with it; he did not breathe it for his back was turned. In order that more might be rubbed in at once, the sides and even the chest might be used in addition to the back. Clean up after the rub by mopping with sponge, soap and water; mop it, do not rub it off. Thus can the mercury shirt with its odor, dirt and "unfriendly feeling" be done away with.<sup>3</sup>

To avoid the irritation, pustules, or even abscesses that sometimes accompany the rub, have the back sponged thoroughly with pure grain alcohol at the bath and the bacteria are killed before being rubbed in.

Dosage to me means not a specified amount daily, but how much does it take to overcome the amount daily eliminated and carry the patient on to saturation, and that quickly. It happens that this amount is more often a half ounce daily

—often an ounce—and sometimes a dram. When the larger dosage is necessary it is divided into a morning and evening dose, a tub bath before one and a sponge before the other. I have no more trouble in giving these large doses than I do with dram doses and I get the effect that satisfies both the patient and the physician. I never worry over the mercury I succeed in getting into a patient but I sometimes do worry over the amount I fail to get in. Mercury is eliminated very rapidly and completely, especially if a little iodine is kept after it.

Saturation of the system means that every fluid of the body is practically the medium of suspension for the minute microscopic globules of mercury. As you near this stage the patient complains that the gums are becoming tender<sup>4</sup> in spite of the massage given five or six times daily. When morning after morning he awakes to find them puffed and requiring considerable pressing to get them comfortable but has them down before night, he is not far off, and when he fails to get them down he has arrived, and the amount of mercury administered is either cut down very materially in order to hold him just under this point for several days, or is discontinued and elimination begins at once.

If you can and do saturate your patient with metallic mercury you destroy all the spirochetes in the system—you destroy them in exact proportion to the completeness of the saturation. Any portion of the system not bathed in the mercury may remain a fertile field for their rejuvenation.<sup>5</sup>

Theoretically you have here a *therapia sterilisans magna* without harm to the human economy; clinically, it will do the work if you know how to use it and be not afraid. As much as it has been misused and abused, it stands to-day without a peer as a specific in syphilis.

Salvarsan as a *therapia sterilisans magna* has proved a grand failure; as an aid in the temporary eradication of active lesions it is a tremendous boon. Salvarsan (or its progeny) has come to stay. The day may come when it will be depended on alone, in oft repeated doses, for a permanent cure, but certainly not until *negative* serum tests mean an absence of syphilis in the system, or until sufficient time has elapsed to note complete freedom of ataxic or other tertian lesions. In the meantime safety lies in the combined treatment with mercury.

It is often stated that salvarsan has cured where the classical treatment has failed, and I cannot help but wonder if those failures received even as full a saturating dose of mercury as they did of the arsenic.

2. Tests are now under way to determine how many hours the mercury is all absorbed from the shirt, as only a trace (too small to estimate) could be found at the end of twenty-four hours, and likewise at the end of twenty-eight days' continuous wearing, with a daily rub.

3. I use this method at Hot Springs only where comfort is paramount to time, as it takes longer to saturate the patient. It works admirably where man and wife come together and one would fain hide the treatment from the other.

4. So many patients come to us with the erroneous idea that they must look for a blue line on the gums that I fear some of their advisers have been mixed in their metals.

5. I am quite confident that when serum tests are so perfected that we can depend upon 100 per cent. of them we will find a vast number of specific cases absolutely cured after a saturation treatment of mercury—cases that we must treat several years merely because we don't know whether they are cured or not and cannot afford the chance.



Each day sees an ever-increasing number of salvarsan patients with return symptoms. What of those cases that have no return for six, eight or ten years, then ataxia? Are you ready to depend on your negative serum reaction? I have used salvarsan in a comparatively few cases, fifty-five in number, but not alone, and only when active syphilis was present. My plan has been to saturate the patient with mercury and at the height of the saturation administer a full dose (0.6 gm.) of salvarsan intravenously. It is my hope that thus few, if any, spirochetes survive. The results have been all that could be desired; the mercury having slaughtered the spirochetes, the reaction has been very mild or altogether lacking. Improvement, specific and general, has seemed more pronounced and abiding. Most certainly the two drugs have worked in perfect harmony. My only deviation from this has been when the patient presented secondaries just beginning, then salvarsan has prevented the humiliation of eruption; this was followed by mercury to saturation with a second dose of salvarsan at the height of the mercurial saturation and seemed close to ideal treatment.

To-day I think this is the nearest we can come to a *therapia sterilisans magna*: metallic mercury to complete saturation and salvarsan in full dose intravenously at one and the same time.

If only the spirochetes remained in the blood stream our dream of a "one-shot cure" might be realized, but as yet no preparation of arsenic has been sufficiently emasculated as to render it non-organotropic when an adequate dose is used to saturate the system—not alone the blood stream, the system.

As the continuous effect of mercury on the blood-vessels tends to arteriosclerosis and also tends to immunize the germs, it should be used intermittently. An average course to saturation and elimination should take from four to six weeks. Patient should remain free from all anti-syphilitic medication for two or three months, and regardless of Noguchi and Wassermann tests, should take another heavy course at about that time, with a rest of three or four months following. Thereafter, twice a year for at least two years as insurance against the escape of a single focus containing active spirochetes, remembering that each and every course should be to complete saturation just as if you were dealing with an open lesion. There should be no such thing as a mild course. Longer treatment than this is surely unnecessary in the average and great majority of cases, and a serum test may be depended on after this, not before.

What is the rôle of the iodid in the treatment of active syphilis? Merely that of a foreman over a gang of laborers. The iodid, *per se*, is not curative, does not work, but keeps the mercury at work, keeps it from being surrounded by a plastic wall and hiding out in the muscle fibers causes it to be thrown back into the circulation that it may

go to some other cell and deal destruction to any spirochetes that may be found there. If this be so, why should a syphilitic patient begin treatment with the iodids *sans* mercury? Is it customary to hire an overseer and give him no men to oversee? I am aware that improvement is often noted from the use of iodids when none is apparent from the use of mercury, but solely because it has liberated mercury already in the system and enabled it to penetrate the stronghold of the spirochetes.

Just one other point in regard to the iodids in syphilis: I am absolutely sure I have seen vastly more harm done to ataxics by physicians in the administration of large doses of potassium iodid (100 to 300 gr. daily) than any good accomplished; have seen their days materially shortened because of the general softening process produced by iodism. As a matter of fact, I can see no good use for the large doses administered in the course of early syphilis merely because the system can be made to tolerate it. When the urine is loaded and the saliva reeks to heaven with it and the sweat abounds, then I say, "a plenty is enough." Ten to thirty grains a day will do this, usually with no digestive or other disturbance.

Yes, there are tertiary lesions that are so walled off that your mercury or arsenic cannot get to them, and they sometimes require the larger dose; but please discriminate, for the others do not.

I want it understood that there is no local prejudice against salvarsan merely because mercurial treatment has been an established institution in Hot Springs for years. It would be the greatest day in the history of that town if it should come about that syphilis was treated and cured at home. Just that minute would our resort fill up with people sick and well who are now afraid to go there—afraid their home people will be suspicious.

Doctors almost invariably tell their patients there is no use to go to Hot Springs, the *water* won't cure them. Who ever said the waters of Hot Springs would cure syphilis? I do claim that by getting the patient away from home, business and friends, where everything is given over to the treatment (an impossible state at home) and where the greatest stimulating water<sup>6</sup> on earth is to be found, where fear is diminished, hope increased, arterial pressure reduced, where elimination is a paramount consideration—before, during and after—that a vastly superior course of treatment can be undergone than when given under the usual handicap at home, and in a much shorter time.

But, when you give it at home, give it as thoroughly as possible, not for days, for weeks or months, but to saturation. Let saturation be the goal.

6. The stimulation of the Hot Springs baths produces the same desirable physiologic effect as does pilocarpin without any of the dangers or depression concomitant with administration of that drug.

## THE PROGNOSIS IN THE TREATMENT OF GOITER \*

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For the purpose of this paper the generic term, goiter, has been retained with the belief that any study of the subject should be as a whole and not a distinct type. That our classification is but a recitation of more or less fixed stages of a transforming thyroid gland, is evident. The ability to change its form or stage has been both microscopically proved and clinically observed. In a more careful study of cases during the last two years this mutation has been observed taking place in a few years, months and even weeks, and doubtless furnishes the foundation for the sudden appearance of Graves' disease following shock or fright, the ground work having been insidiously laid and the mental excitation furnishing the precipitation. However, a classification must be retained to furnish the basis of treatment according to the stage, but this must be taken with due consideration of the previous history and careful observation of the case under and after treatment. Hence, our classification should read as follows: simple hyperemic or congestive goiter. The next step in progression gives us our purely colloidal goiter; as hyperplasia is engrafted on the colloidal we have our parenchymatous goiter, presenting many degrees of mixture of colloid and hyperplasia. This form has these possibilities; a reversion to the colloidal type, either with or without treatment. It may rapidly become cystic even in the young. It generally remains partially cured and innocuous until it develops one of the following types: first and most commonly Graves' disease; second, a large combined cystic and fibrous goiter (the compression type); or third, it may become malignant. This, from our observation, is the compass, in a general way, of pathologic and clinical goiter, and the most important thing in treatment is to recognize from what point we start.

As an adjunct to this there is a better recognition of early symptoms of the influence of the thyroid gland in disturbed health. We have been taught not to recognize anything seriously wrong unless some one or two of the four cardinal symptoms of Graves' were exhibited, namely, tachycardia, marked nervousness, the presence of a goiter and exophthalmos. More recently we observe as early symptoms hysteria, neurasthenia, a daily headache that is usually a morning manifestation which cannot be accounted for in any other way, and a sense of heat and oppression where normal persons are comfortable. There are several skin lesions to be counted as evidence and there is the marked tremor without other

so-called nervous manifestations. Generally, with some of these there is the rapidity of the pulse, particularly if there is the headache. Later we may find a vascular thrill in the neck that belongs only to the thyroid influence, usually associated with a pounding heart action limited to the thyroid region that marks the beginning of Graves' disease. At this time we have a "fulness" of the neck, or thyroid enlargement of indescribable pathologic status; and as has been said, treatment must seriously consider the starting point.

The assumption that there has been progress made in the treatment of goiter is based on the recognition of the fact that there is a widespread increased interest manifesting itself in goiter in the medical profession; and that there is a better understanding of what cannot be done by medicinal treatment, and just how much can be accomplished by therapeutic agents and the greatly improved record of surgery.

The first statement is an observation. In evidence of this statement and also showing the frequency of goiter in some form, Dr. J. J. Carter of Weston, Platte County, Mo., has reported to me the existence of twenty-eight cases of goiter in various stages in his practice. The population of the county is 1,019. This report is only one of many, but exceeds any other one in numbers.

The second is substantiated by a marked tendency in these same men to reject medicinal treatment or recognize its limitations as a "cure." This is the conclusion of most of the careful observers who are doing research work. From a clinical standpoint my observation of 173 cases leads me to believe that there is no medicinal cure for goiter. That drugs can influence symptoms during their manifestation is not disputed; that they many influence a recession of a goiter is skeptically admitted. I have yet to see, or authentically know of, a cure by the use of drugs. If there were no other factor to militate against the success of this method, there is the natural disposition in every physician to grow indifferent to a case in which he is using an agent of doubtful efficacy and slow results, and a still greater tendency on the part of the patient to lapse in treatment under the same circumstances. There is one exception to be made to the statement that we are skeptical about recessions under drug influence, and that is the influence of iodine so carefully elaborated by Drs. Marine and Lenhart. They have shown that the more hyperplasia the gland exhibits the less is the exhibition of iodine content in inverse ratio. They have shown that the thyroid readily takes up iodine, less according to the amount of hyperplasia. They have accomplished reversions from hyperplasias to colloidal states, but no assertion is made that it is a cure.

Kraus in a recent article regarding borderland cases remarks: "They deserve special attention

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as the prevailing tendency to give iodids in prophylaxis or treatment of arteriosclerosis is liable to induce these nervous disturbances or aggravate a latent tendency to exophthalmic goiter." That only recessions may take place by the use of the x-ray treatment, and not cures, is probably true. In practically all the cases I have seen, some medicinal treatment had been taken for a varying length of time and no cures. In the 173 cases five had rather faithfully been subjected to the x-ray treatment with no cures, but encouraging recessions in two. These statements are not made in opposition to these methods of treatment, for indeed I believe in them as an aid to preliminary treatment. The one thing that should be impressed on those treating their cases by these methods is to watch the cases after for exacerbations and development into the exophthalmic type.

The use of the thyroid extract and serum has been reserved for consideration apart from drugs for the reason that they are more physiologic in their action. That thyroid extract influences early developments and may hold them in check has been unmistakably noted. It cannot be indifferently administered as a routine treatment, but must be carefully watched lest it may do harm. Crile has called attention to serious manifestations developing from an ordinary dose. Its use must be very careful in the cases on the border line between beginning hyperplasias, which of course cannot be accurately determined clinically, and beginning Graves' cases. The Beebe and Rogers serum as an agent against well-developed cases of Graves' disease and particularly those which the surgeon may reject, still hold a place of merit. My personal experience is satisfactory as to results in two out of five treated. Failure in the other three cannot be justly charged to the serum.

The part which surgery has played in the treatment of the various conditions of goiter is one to inspire confidence in its results. The mortality percentage in the hands of the best operators has been brought down approximately to 5 per cent. Where cases are selected the mortality is practically obliterated. The right of the surgeon to select his cases is not always proper, purely from the standpoint of making statistics. On the other hand, he has the right to say that the rejected cases should be offered earlier for operation. If there is one factor which will contribute to the success of surgery, it is its intervention at the proper time. Even in exophthalmic cases success should be the rule if done early. No one can always say just when the danger point has been reached, but a plea is made for operation in established goiters in adults and particularly if the early signs of Graves' are noted.

For the successful handling of the serious exophthalmic cases, Dr. Crile has devised a

psychic treatment combined with the ligations of superior vessels: treating with success twelve cases, surgically; but he properly has a right to say that the ultimate result is one of doubt. Jacobson has secured good results by ligation of the superior pole of the gland; a technic which must approach that of Dr. Crile. For emphasis on the points I wish to make on operative cases, I review the deaths in my experience, four out of fifty-six operations as follows: Fibrous goiter in patient 63 years of age, marked compression symptoms, emphysema and valvular disease of the heart; death resulted four days after operation. Early operation should have saved the case. The second, an adenomatous goiter which would have died without operation, and doubtful if early operation would have availed. The third, a pronounced exophthalmic goiter which seemed favorable for operation; death three days later from toxemia. This case might have been saved by earlier operation, or to-day by the improved surgical technic. The fourth, a large compression goiter, undertaken with an appreciation of many dangers for the relief of increasing suffocation, survived the operation three and a half days and died from cerebral embolism. This case could have been saved by early operation before the changes in the vessel walls had occurred. Within this same time (three years) I have witnessed two deaths without operation and a third authentically reported. The first a compression goiter of marked size with pronounced Graves' symptoms. Case was admitted to St. Mary's Hospital in bad state and put on rest and morphin and atropin treatment preparatory to operation. On the fifth day after admission while in a comfortable state, without any known reason, the symptoms of great nervousness and suffocation suddenly set in and death ensued in four hours, practically from suffocation. The second case was admitted to Bethany Hospital with moderate Graves' symptoms present, a medium-sized goiter; marked general arteriosclerosis with a history of a recent temporary paralysis of the right arm. On the fifth day after admission sudden plugging of the brachial artery occurred, followed by gangrene and septic death without operation at her own election. The case reported to me had exophthalmic goiter and died from gangrene of the lower limbs.

The results in my other fifty-one operative cases, twenty-four of which were exophthalmic, have been most gratifying. The results in all have been positive cures except in a small number of exophthalmic cases. No case presented has been rejected for operation. The group, apart from the exophthalmic cases, embraces cystic, parenchymatous without symptoms, compression goiters of large size and mixed type, two purely fibrous and one malignant, which subsequently died from recurrence. Of the twenty-four Graves' cases fourteen marked cases were cured by uni-

lateral thyroidectomy. Four extreme cases have been greatly benefited almost to the point of cure, but for accuracy I shall not claim that; two were early types and while immediately cured after operation, after five and two years are in doubt as to the need for further surgical intervention; four are recent operations, and while their condition is perfectly satisfactory at this time it would not be right to claim them as complete cures. All these cases have had a unilateral thyroidectomy or unilateral with the middle lobe. I have had no disturbing symptoms of any kind follow in a single case. These results are comparable with the operations of other men, and, as I have said, are encouraging for the operative treatment.

To recapitulate:

1. There is no known medicinal cure for any form of goiter.

2. Iodin can cause reversions, but cannot be regarded as a cure, and in certain cases may do harm.

3. Thyroid extract is efficacious in suspending congestive and colloidal goiters; the result may be permanent.

4. The Rogers and Beebe serum is curative in 25 per cent. of serious cases and stands next to surgery in its results.

5. The x-ray I do not believe results in cures. It does cause recessions, and its possibilities in a limited number of cases are not disputed.

Surgery holds to its credit the greatest number of permanent cures and is a safe and well-advised procedure if done at the proper time.

#### MANIFESTATIONS AND TREATMENT OF TYPHOID FEVER IN CHILDREN \*

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The object of this paper is not to consider the general subject of typhoid fever, with an enumeration of all the various complications, symptoms and pathology and the countless remedies that have been suggested; I have in mind to emphasize how the disease is sometimes overlooked because we are expecting a clinical picture resembling the typical case in the adult. Furthermore, I wish to outline the simple treatment which, in my experience and in that of others found recorded in the latest literature, has come to be recognized as most beneficial.

That the disease does differ as a general thing in children, both as to the limitation of its pathology and as to the clinical picture, is admitted by most authorities.

That the writers on the subject are at variance regarding the frequency of typhoid in infancy is manifest from a study of the literature. As long as we believed that the disease does not affect

infants, a teaching found in the text-books of only a few years ago, naturally we regarded it in making a diagnosis as an impossibility. Recent findings do not warrant us in concluding that typhoid fever is unheard of in young children,<sup>1</sup> even though we still believe that it is rarer under 5 years of age than later in childhood. In Koplik's series of cases 16 per cent. were before the fifth year. But no one, as yet, knows the frequency of its occurrence in early life, since the disease has often been regarded as absent and has therefore been overlooked. Adams<sup>2</sup> believes the disease is not rare in infancy, and reports an epidemic in one institution in which infants under 1 year of age were affected. Only of recent years, probably the last five, have scientific methods of diagnosis regarding typhoid become common, and as bacteriologic examinations become the routine in fever cases the rarity of typhoid in children decreases and statistics become valuable.

Fetal typhoid is possible,<sup>3</sup> or the child may be born at term with positive Widal reaction possessing an immunity acquired from the mother's blood. Breast-fed and sterilized-milk-fed infants are, of course, not so liable to become infected from their food as are older children. Certain children have therefore been born with an immunity acquired from the mother who had recent typhoid, and others, from the nature of their food which is sterile, escape infection. Beyond this one cannot say that infants in general possess any resistance to typhoid not possessed by older children.

*Pathology.*—I shall not attempt to go into the pathology of the disease in children except to say that most writers agree that the younger the individual the more apt is the disease to be a septicemia without much localization in the abdomen. Lazarus-Barlow<sup>4</sup> reports two children, one 13 months old, and one 24 months old, who came to autopsy with proved cases of typhoid, the bacilli being recovered from the spleen and the mesenteric lymph-glands, in which cases there were no intestinal lesions. The number of these proved cases is small and we cannot say that a case of typhoid which recovers without operation had or had not intestinal lesions. In Adams'<sup>2</sup> forty-three cases with autopsies the characteristic lesions and structural changes in other organs were found. But most authors are of the opinion that anatomic lesions are not so common or so characteristic, especially in the frequency of ulcerations and perforations,<sup>5</sup> in younger children. Enlargement of the mesenteric lymph-nodes, of Peyer's patches, and of the solitary follicles are usually the only changes seen in the intestinal region. It is only natural to conclude that the milder pathology explains the milder course and the fewer symptoms of the disease as we see it in older children.

\* Read at the meeting of the First Councilor District Societies, Langdon, Mo., October, 1911.



*The Diagnosis of Typhoid in Children.*—For the reason that there seems to be no limit to the variety of unusual cases, among these such rare ones as peri-articular typhoid abscess of the hip,<sup>7</sup> or the disease limited to the gall-bladder,<sup>8</sup> or a posttyphoidal maniacal condition after the disappearance of the fever,<sup>9</sup> I shall confine myself to the cases as we generally see them.

I believe with Rommeler<sup>10</sup> that symptoms of a typhoid infection in an infant are often so slight that a child may seemingly be normal and not be suspected of transmitting the disease to others. He believes that on account of the difficulty of diagnosis in an infant the child should be kept with its infected mother. Initial chills and other early symptoms are not often seen, nor do they have any diagnostic importance.

Clinically the physician sees typhoid beginning in two ways: those which in a few days suddenly reach their maximum; and those in which the child is gradually losing color and strength, has fever increasing daily, and the bowels are somewhat constipated. The precipitous onset is more common in younger children and may resemble a pneumonia. In these cases with sudden developing fever the temperature curve is not characteristic. With the gradual onset one sees a gradual rise for the first week, but afterward nothing typical, unless the irregularity is typical.

Pain is hard to ascertain in most children, though some tenderness in the region of the spleen may be elicited. Even with the advent of a perforation there may be no pain at first.

Abdominal distention and meteorism are not so common in children.

Rose spots, according to Marfan, are absent in one-third of the cases, and in Adams' series of cases not so frequent as in adults.

The markedly coated tongue is absent. I do not remember to have seen a bed sore in a typhoid child.

Another classification one might make in typhoid is the division into those with constipation and those with diarrhea. In older children constipation is the rule.

Typhoid fever in children might also be divided into abdominal and cerebral types. In Adams' series, delirium was present in 56.18 per cent. Some cases are suggestive of meningitis.

Enlarged spleen is an accompaniment of so many conditions in childhood that it is not distinctive.

Perforation is rare under 5 years; between 5 and 10 it is half as common as in adults. The advent of a perforation may be rather obscure at first, but there will be vomiting, a drop in temperature, and the development of a leukocytosis. Later pain will appear. The presence of perforation early in the disease is complicated by the virulence of the disease; likewise during a relapse. During the convalescent period the prognosis is more favorable.<sup>13</sup>

Stepowski<sup>14</sup> has reported sixteen cases of endocarditis, found in the literature, in children from 3 to 16 years of age, a condition which is more common in children than in adults. This is not due to the typhoid bacilli but is a secondary infection.

The exact diagnosis of typhoid is found in the examination of the blood. The greatest number of cases that were formerly called typho-malaria are no longer so designated. In infancy a hypoleukocytosis is characteristic.<sup>11</sup> With the agglutination test of Widal, and with blood cultures the many confusing and difficult cases of tuberculosis, pneumonia, tuberculous meningitis, paratyphoid conditions and appendicitis can be excluded, while typhoid infection can be definitely ascertained.

I believe the prognosis of typhoid in children depends on the severity of the epidemic but that in older children it shows a lower mortality than with adults.

*Treatment.*—It would be a waste of time to mention the countless symptomatic remedies and the innumerable specifics that have been presented. Intestinal antiseptics have not proved themselves of any value. The treatment resolves itself into the usual nutritive, hygienic and vaccine. It may be outlined simply as follows:

1. A daily soap-suds enema, if the bowels are constipated, and a normal salt enteroclysis if the temperature is high, if the patient is taking little nourishment, or if hemorrhage occurs.

2. Bathing, limited to a warm bath, once daily, or an alcohol sponge bath for fever.

3. No medicine except for special symptoms as they arise.

4. Feeding. I wish to repeat what Kerr has said<sup>15</sup> that in the treatment of typhoid in children starvation has no place. In infancy the food should be suited to the age. Kerr's estimate of the amount needed is a good one for comparatively young children: for every pound of weight the child should have daily, milk  $2\frac{1}{2}$  ounces, sugar  $1\frac{1}{4}$  to  $2\frac{1}{2}$  drachms, raw egg one-half, cereal gruel 1 to  $1\frac{1}{4}$  ounces. For variety, vegetable purées are added to hot milk thickened with arrowroot, stale bread crumbs, toast, zwiebach, well-cooked cereal, custard, whipped or ice-cream, buttermilk, malt soup.

5. In every case a vaccination should be performed at the earliest moment that typhoid is diagnosed, as the earlier it is done the more apt is the disease to be modified. Vaccine is given every four or five days as long as the temperature is high or shows a tendency to rise following the former reaction. According to Hall and Castle, of Kansas City, there may be needed from one to four vaccinations. Various doses are recommended by different writers, no definite number of bacilli having been advised for administration to children. Waters and Eaton,<sup>16</sup> of Boston, confirm the general opinion, especially that of the

men who have vaccinated thousands in the armies of this country and abroad, that the administration of vaccine is harmless. They state that its use reduces mortality, shortens the disease and renders relapse less liable. They report five children among thirty-six cases to whom vaccine was given, to all with good results. Gallison,<sup>18</sup> from an extensive review of the literature and his own experience, concludes that two things seem fairly certain: vaccination does lessen complications and does reduce the number of relapses.

John Lovett Morse, of Boston, writes me that he has not as yet had any experience with the use of vaccine in the typhoid of children.

Although there is nothing in the literature as yet regarding the applicability of the vaccination treatment to typhoid in children, one is justified in believing that whatever the good results are they apply here. From the almost universal favorable opinion presented by the men who are now using vaccine in the disease it is almost certain to be used as a routine in all cases of typhoid. My personal observation of its efficacy is as yet limited. I shall soon report a series of cases in my own practice and in that of others coming under my observation.

*Prophylaxis by Immunization.*—Immunizing all exposed persons shows brilliant results. This is accomplished by inoculating the person to be protected by injection of killed cultures of the typhoid bacilli. A uniform dose has as yet not been determined, but as no injurious effects have as yet been observed in thousands of inoculations one need not hesitate to give an injection of 50,000,000 for the initial dose to 200,000,000 for the second dose, after the development of antibodies ten days later. The Widal reaction is positive in each case after inoculation.

In Russell's<sup>17</sup> paper the immediate effects of vaccination are described as producing a local and general reaction. The site of the inoculation in four or five hours becomes red, swollen and tender, the glands become enlarged and tender. In forty-eight to seventy-two hours the inflammation leaves. The general reaction is not constant, symptoms, if present, appearing in half an hour to half a day, and consist of headache, malaise, the temperature ranging from normal to 103 F. Rarely this is accompanied by chills, vomiting and diarrhea. These symptoms are all gone in about thirty-six hours. Major Russell reports no deaths from typhoid and only six cases developing in 14,000 vaccinations. These do not include the recent cases vaccinated in the United States Army on the Mexican border where only one case of typhoid developed and there were no deaths. In Russell's experience the reactions from immunizing children are even less marked than in the adults.

In conclusion, I wish to say that I believe we are justified in adding vaccination to whatever

treatment we employ in children, and that every physician owes it to his community to protect those exposed or those who are liable to be exposed by urging vaccination. The prevention of a single case will often forestall an epidemic.

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#### SOME SUGGESTIONS RELATIVE TO THE PRE- PARATORY OPERATIVE AND POSTOPERA- TIVE TREATMENT OF CASES OF ACUTE INTESTINAL OBSTRUCTION \*

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An analysis of the records of fifty-nine cases of acute intestinal (mechanical) obstruction coming under my care with the view of ascertaining the treatment received in each case prior to operation, and the bearing this treatment had on the mortality, has convinced me that the general profession has yet to appreciate "that acute intestinal block is one of the gravest and most disastrous surgical emergencies," and that the outcome of a given case depends largely on the time elapsing between the development of the condition and its relief by surgical interference. Of the fifty-nine cases here recorded, twenty-seven required primary resections for gangrenous bowel. All these cases save one resulted from strangulations due to hernia; the exception being due to a gangrenous intussusception. Of the twenty-seven cases five died, giving a mortality of a little over 20 per cent. In twelve cases the formation of an artificial anus was necessary. Three of these were for strangulated umbilical hernia, four for strangulated inguinal hernia, and five were for acute obstructions due to malignancy. Of these twelve cases six died, giving a mortality of 50 per cent. Twenty cases of strangulated inguinal hernia in which the contents of the sac was such that it could be returned to the abdomen, resulted in the loss of one case, a mortality of 5 per cent. The total mortality in the fifty-nine cases was a little over 20 per cent., a mor-

\* Read in the Surgical Section of the Missouri State Medical Association at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.



tality entirely too high and largely due to avoidable conditions.

The history of each case without a single exception showed that temporizing methods were resorted to prior to operation. To illustrate, let me briefly relate the history of two cases selected at random from the list: Mrs. T., aged 49 years, was admitted to the hospital suffering from a huge strangulated umbilical hernia. Fifty-two hours before admission she was suddenly seized with violent pain in her abdomen and her hernia, which hitherto she could easily reduce, became irreducible. Strangulation rapidly set in. A physician was called. He immediately gave her a hypodermic and made forcible efforts to reduce the hernia. Failing in this, castor oil was prescribed and a poultice was placed on the hernia. At a subsequent visit, renewed efforts at reduction were attempted and morphin was again administered. She grew gradually worse and when received at the hospital she was toxic, vomiting fecal matter and in an extremely bad condition. The thin skin covering the hernial sac was blistered and necrotic. On opening the sac, a gangrenous cecum, ascending and transverse colon were found.

Miss J., a school teacher, 24 years old, was brought to St. John's Hospital from an adjoining town with the following history: Three days before admission, being previously in perfect health, she was suddenly seized with violent pain in her abdomen, accompanied by vomiting and extreme shock. A physician was called, who discovered a tumor an inch to the right and slightly below the umbilicus. A diagnosis of acute intestinal obstruction due to an intussusception was made. She was given a hypodermic, castor oil, hot applications to the abdomen, and the rectum was ballooned. This treatment was repeated, the patient gradually growing worse. She was brought to the hospital on the morning of the third day in a most critical condition. On opening the abdomen, a gangrenous intussusception of the enteric variety was encountered, necessitating resection and an end-to-end anastomosis.

The histories of these two cases outline very accurately the treatment usually given to patients suffering from the condition under consideration. Should a plumber have been called to treat an obstruction in the bath-room or the kitchen similar in character to the conditions commonly found in cases of this type and apply the same methods of treatment, it is more than probable that the head of the household would order his arrest and request that he be sent to the psychopathic ward of some nearby institution in order that his mental condition might be looked into. That patients daily receive treatment of the character above outlined is not to be wondered at. Almost every late text-book on surgery teaches taxis in the treatment of incarcerated and strangulated hernia. Papers are still being written

on the value of inflating the bowel in the treatment of intussusception. The following I quote verbatim from a text-book on surgery, the pages of which are hardly dry from the press. The text was written by one of the most brilliant, conscientious and successful operators in this country, a man who has done much to perfect modern surgical methods. In discussing the treatment of strangulated hernia under the head of taxis, he says: "Place the patient on a couch or a board, or if this cannot be obtained, take a door out of its frame and place the patient on it; then elevate the lower end of this so that it will be at an angle of about 40 degree with the floor. Have him draw up his knees and then manipulate the protruding portion gently, so as not to cause any injury to the intestine, remembering that the longer the strangulation has existed, the more gentle must be the manipulation. It is well to permit the patient to manipulate the hernia himself while he is in this position, because he is frequently more experienced, and consequently may be more successful than the physician. If reduction is accomplished, it is well; if not, it is best to explain to the patient that relaxing the muscles by the use of an anesthetic you may still be successful; but if this fails, it will become necessary to sever the circular band which prevents the reduction of the hernia." That such advice from so eminent an authority is bound to do harm, cannot be gainsaid. He advocates a procedure to be practiced by others which could only prove disastrous in his own skilled hands. My personal experience has taught me that a patient who has a reducible hernia and this hernia suddenly becomes irreducible, if he, the patient, cannot reduce it, a surgeon cannot without doing damage to the contents of the sac. I have seen many cases where great damage has been done by the method above described. The literature contains the records of a large number of cases where reduction has been thought to have been accomplished, the patients dying later from internal strangulation. If it is difficult at times for a surgeon to determine with the contents of a hernial sac in front of him whether or not he should remove or return the bowel to the peritoneal cavity, taxis is certainly a most questionable procedure.

What has been said against the application of temporizing tactics in the treatment of strangulated hernia applies with equal force to the treatment of mechanical obstruction due to other causes. I simply use the hernia case to illustrate my meaning as this condition gives perhaps 50 per cent. of all cases of acute intestinal block. The time has come when we, as surgeons, should accentuate the importance of relieving these patients in the early hours of their trouble. Operations undertaken at such a time are simple and satisfactory. The conditions found at late operations requiring the wide removal of gangre-

nous bowel or the making of an artificial anus demonstrate conclusively that the given patient has been neglected, and that the condition present could have been avoided had early surgery been instituted. It is, however, not the purpose of this paper to discuss the early treatment of this condition. As Monyon truly says, "the experience of operating on a case of intestinal obstruction within the first twenty-four hours is a privilege that comes to but few surgeons." As such cases generally reach the operating table late, I wish to briefly outline the procedures which have served me well in the treatment of this most grave emergency.

"An examination into the conditions found at an operation or at an autopsy shows that in all cases, two factors are at work determining the fatal issue. Of course, the first and least important is the mechanical block in the bowel, the actual obstruction. The second, and incomparably the more severe is the septic absorption from the distended, congested and perhaps ulcerated bowel above the place of stoppage. It will be clear, therefore, that in operating on patients so afflicted, the relief of the mechanical obstruction is but a part, and that the smaller and less significant part, of what the surgeon must needs do." As the principles underlying the treatment of such cases are practically the same, whether the obstruction be due to an intussusception, volvulus, strangulated hernia or other causes, I can best illustrate by describing the technic employed in the treatment of a case of gangrenous bowel due to a strangulated hernia.

Preparatory treatment: This preparation should begin with a careful washing of the stomach. Almost invariably, the stomach will be found filled with highly toxic material, the removal of which is of the greatest importance. Unless the stomach is carefully washed there is always danger of fecal drowning. Hypodermoclysis, before and during the operation should be given, if the condition of the patient demands it.

The sac is opened in the usual way. After relieving the constriction, the bowel is gently pulled down until healthy bowel is reached. The bowel above the constriction is clamped well back into healthy tissue. The clamp is placed on the distal bowel and the bowel is cut across. A Paul's tube or an ordinary glass drainage tube to which a rubber hose has been attached, is immediately tied in the proximal bowel and the clamp above is removed. The gut to be removed is isolated with gauze, and while the operator ties off the mesentery, the assistant manipulates the bowel above so that as much of the septic bowel contents as possible can be drained into the receptacle under the table while the surgeon is completing his work. By this method no time is lost and by the time the operator has removed the segment of gangrenous bowel the gut above will have drained an astonishing amount. The proximal bowel is

again gently clamped and the anastomosis is completed with either sutures or the button. A stab wound is made above the pubis and a drainage tube is placed in the vesicorectal pouch and the hernial ring is closed by the method suited to the individual case. As wounds of this type are soiled wounds it is advisable that a small drain be placed in the hernial wound.

This method of treatment is satisfactory in dealing with the inguinal varieties of hernia, but occasionally a tightly constricted gangrenous loop of bowel is found in the femoral ring. In dealing with this condition, I have found it of great advantage to make a supplementary abdominal incision, delivering the gut through this wound. By this method wide resection can be accomplished and proper drainage of the distended bowel above instituted, a procedure which would be difficult if an attempt was made to resect at the femoral outlet. In resecting gangrenous bowel, it is of the greatest importance that the resection be made wide, well back into healthy tissue. Unless this is done leakage is apt to occur, defeating the object of the operation. I believe it far safer to resect in all cases where the vitality of the gut is in any way questionable. In the series of cases above reported there was one death due to the return of a piece of bowel into the peritoneal cavity the vitality of which was questionable. In case the condition of the patient is such that the making of an artificial anus is mandatory, a procedure which I have found of value in dealing with gangrene of the small bowel, may be briefly described as follows:

As soon as the sac is opened, the constriction relieved and the operator determines that an artificial anus is necessary, the bowel above and below is rapidly pulled into the opening. A heavy clamp is made to perforate the mesentery at either limit of the diseased portion. The mesentery is then tightly clamped. A clamp is then placed on the distended bowel above. A similar clamp is placed below the first one, and the bowel is cut across. The bowel below is clamped in a similar manner. A rubber drainage tube is tied in both the proximal and distal ends of bowel. The gangrenous gut is quickly cut away and the clamp holds the mesentery fixed in the opening. The two tubes are tied together with catgut suture. Gauze is then made to surround the protruding bowel and the wound is left open. By clamping the mesentery in the manner above described, no time is lost and the clamp serves the double purpose of controlling the hemorrhage and fixing the two ends of bowel in the wound. The two tubes define accurately the opening into the two ends of bowel. In a few days the clamp, gauze and tube can be removed. The irritation of the fecal matter generally results in firm contraction of the wound, leaving the two ends of bowel firmly fixed.



The postoperative treatment in cases where resection has been done is practically the same as that which is usually given to any abdominal section: the frequent use of the stomach-tube, the avoidance of morphin and strychnin, the withholding of all food by mouth and the liberal use of normal salt solution, both under the skin and in the rectum.

Metropolitan Building.

## AN OBSCURE INFILTRATION OF THE ABDOMINAL WALL \*

LUTHER A. TODD, M.D.

ST. JOSEPH, MO.

I ask the indulgence of the Association if the case herewith studied has been reported too much in detail. Not only is the pathologic condition one of extreme rarity, but in the management of the case a lesson has been learned by me which may be of benefit to all.

Every surgeon has been struck with the similarity that presents itself occasionally between neoplasms and inflammatory tumors, as manifested clinically. The resemblance is often so marked that mistaken diagnoses must necessarily occur, much to our embarrassment and chagrin. Again, the uncertainty of a correct pre-operative diagnosis will at times lead to an improper operative procedure, either a needless operation or one that is incomplete for the attainment of satisfactory end-results.

The acute inflammatory tumors are not likely to be diagnosed neoplasm. Their course is acute, their clinical symptoms well recognized and the bacterial origin easily demonstrated with the microscope. On the other hand, the chronic inflammatory processes, especially those due to syphilis or tuberculous infection, frequently present such close clinical resemblance to neoplastic growths that the microscope alone can determine the true pathologic picture. Simple chronic inflammation is usually easily recognized but there is a type, fortunately rare, which, depending on anatomic location, has the course and appearance of a new growth. The inflammatory process is characterized by an enormous cell proliferation, lying in proximity to the original site of infection and under the control of the organism. Many of these reported cases of extreme cell proliferation have depended on some discoverable irritant, as parasites, ligatures, foreign bodies, etc. In some no local irritant can be found. The case I report as follows:

### REPORT OF CASE

Female, unmarried, age 20. Came to hospital on May 15, 1910.

*History.*—Parents living and well. Mother is part Indian. Tubercle bacilli and syphilis negative.

Patient has always been well. Menstruation always regular and normal. Formerly suffered occasionally with dysmenorrhea. No leukorrhea or pelvic disturbance of any kind.

In May, 1909 (12 months ago), she strained herself while lifting and next day experienced moderate pain and soreness in left lower abdomen, but there was no swelling. In bed four days with moderate fever. There was no diarrhea, constipation or nausea; up and around during the next week, with some abdominal soreness; then went on a trip. During June, July, and August there were no symptoms of any kind and patient felt perfectly well. In September, 1909, after getting feet wet, she suffered a recurrence of the pain and soreness in the left side, of the same severity as during the first attack and accompanied by slight fever. She was in bed a week then up for a week but finally had to go back to bed for four weeks. Characteristic symptoms were pain in left side and fever. No leucorrhoea, bladder, bowel or pelvic disturbance. Was treated for stomach and ovarian trouble with local applications. The attack gradually subsided and patient was up and around for three months, with occasional recurrence of soreness in the left side.

In February, 1910, she received in lower abdomen an accidental blow from a small book, but except for soreness lasting a few days the accident was passed off as trivial.

In March, 1910, she first noticed, while putting on a corset, that lower part of abdomen felt hard, caked and sensitive. No pain and scarcely any tenderness, but the abdomen was stiff, interfering somewhat with forward motion of the trunk. At this time there was slight bladder irritability but no pain, the condition lasting a week or so. There was progressive loss of flesh and strength. The area of hardness was noticed to extend upward.

One week ago a hard painful tumor began to form in lower abdomen above the pubes and rapidly became larger until the upper limit was at the umbilicus. Pain over whole lower abdomen has increased in severity. Loss of weight in one year, 21 pounds. At no time has there been any disturbance of any of the abdominal or pelvic viscera, except slight bladder irritability two months ago. Physical examination: Patient walks around hospital but favors abdominal muscles by leaning forward. Rather pale, somewhat emaciated, but of vigorous constitution. Heart, lungs, and kidneys negative. Temperature 100, pulse 112, br. 22, hemaglobin 68, leukocytes 8,600.

Locally, lower abdomen very prominent, and in contour resembles that of pregnancy, a distended urinary bladder or a uterine fibromyoma. There is an oblong tumor the size of a cocoanut occupying the hypogastrium from pubic arch to umbilicus. It is well defined, hard, smooth, firmly fixed to skin and deeper parts, very tender to palpation, not fluctuating. The skin is a reddish purple, and dilated veins prominent. The lateral edges of this tumor although sharply defined at both semilunar lines, shade off imperceptibly into hard, rigid, thickened abdominal wall, the whole constituting a mass. This is of extreme woody hardness, irregular in outline, and moderately tender. The upper limit of the area of board-like abdominal wall is well defined as a rounded edge and extends from the umbilicus to each anterior superior iliac spine. Below and laterally the mass appears to be continuous with and of the same consistence as the pelvic bones.

Bimanual examination reveals a greatly thickened abdominal wall encroaching posteriorly upon the peritoneal and pelvic cavities and displacing bladder, uterus and appendages backward. The uterus is retroverted and fixed by pressure of the tumor in front. The bladder encroaches freely upon anterior vaginal wall. There is no sign of intrapelvic or intra-abdominal tumor.

*Operation* May 16, 1910. The tumor, with the skin in the median line, was excised. Found to be a hard,

\* Read in the Surgical Section of the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting, held at Kansas City, May, 16, 1911.

fibrous mass occupying subcutaneous space, firmly attached to skin and incorporated with anterior rectus sheath. The degree of fusion to the latter was so firm that it was necessary to remove several square inches of the sheath. The sheath was of stony hardness, as were the fibers of the rectus muscles. Dissection was impossible excepting with strong blunt scissors. An incision through the right rectus showed the normal muscle to have been replaced by tissue of such resistance that it gave a cutting sensation of hard rubber or cartilage. The color was changed to pale yellow or gray. The tissue, however, was very vascular. The muscle, as well as sheath, was quite thick. The extreme hardness, which appeared to be uniform, was characteristic. The obliques and transversalis muscles below the umbilicus, as well as fascia, aponeurosis and subcutaneous tissue presented an identical appearance, and were of stony hardness. The peritoneal cavity was not opened. To the naked eye the tissues gave the characteristic appearance of neoplasm which had progressively infiltrated the several planes of the abdominal wall in an upward direction. After cutting several sections for microscopic examination and making a provisional diagnosis of sarcoma too far advanced for total extirpation the wound was closed with drainage. Our belief in the possibility of sarcoma was strengthened by the history of progressive loss of flesh and strength.

**Pathological Report.**—The tumor of subcutaneous tissue contains in the center a suppurative area the size of an egg. Microscopic examination of preparation from other regions shows a diffuse suppurative inflammation.

**Post-Operative Course.**—Temperature normal in 12 hours and has remained normal. Free drainage of bloody serous material for several days gradually becoming less but not entirely ceasing. One month later, patient has felt perfectly well. Several small pockets of pus in the subcutaneous tissue have been liberated from time to time. Healing very tedious. No tendency toward resolution. Edges of each sinus resemble keloid. The lower half of abdominal wall still of stony hardness.

Two months later, the hard indurated area somewhat smaller as shown by recession of upper margin. Tenderness not marked, weight 103. General health excellent. Drainage of seropus still rather free from several pockets in the subcutaneous tissue and muscle. These are curetted from time to time and swabbed with iodine, alcohol or Harrington's solution. The sinuses persist in spite of local measures.

Internally, sodium iodid, gr. v, t.i.d., has been taken for several weeks. There has been no visceral disturbance. August, 1910, to January 15, 1911, gradual gain in weight. Excellent general health. She can dance and run sewing machine. Overexertion or raising arms above head produce a recurrence of the pain and soreness in lower abdomen. Bowels regular, menstruation normal.

Off and on she suffers pain and soreness, more severe on the right side. Free drainage from two sinuses.

Physical examination Jan. 15, 1911. Two sinuses with a seropurulent discharge, one leading downward behind symphysis, the other upward beneath external oblique muscle towards anterior superior spine. Lower abdomen still tender and extremely hard to the touch. Upper limit of indurated area has receded considerably, especially on left side.

Sent to hospital; both sinuses laid freely open exposing fascia and muscles. There is a large pocket in space of Retzius which is cleansed of an ounce of grumous, gelatinous material. Surrounding this pocket the tissues are of woody hardness. The upper pocket is divided by the external oblique aponeurosis which is one-half inch in thickness and as tough as leather. The muscles present the same grayish appearance, and their consistence is as hard and resistant to cutting as

at the previous operation. The whole undermined region was swabbed with Harrington solution.

Both wounds draining freely of bloody seropus six days later. Pathological report from sections taken from different levels of the abdominal wall as follows:

Microscopically the material submitted is inflammatory tissue. The larger section shows a large amount of granulation tissue which is complicated in places by tiny abscesses. Below this is a dense connective tissue which is free from exudate save in the neighborhood of blood-vessels where a number of leukocytes can be seen. This section is one showing a small portion of skin.

The other sections show marked inflammatory reaction. Practically solid cellular masses consisting of lymphoid and plasma cells and polymorphonuclear leukocytes make up the whole section. In places remnants of muscle or connective tissue can be seen.

This case is certainly interesting from a clinical point of view. The sections show nothing beyond what is seen in simple inflammation. I do not know how to account for the persistent nature of the case and the slow repair.

We have here then a case in which the operative diagnosis was sarcoma and the prognosis apparently hopeless. The subsequent history and course, the pathologic reports from two sources, and a study of the available literature has convinced me that I have again been the victim of a diagnostic error, and that the disease in question constitutes an atypical manifestation of inflammation obscure in origin, extremely chronic in character, with extraordinary physical signs and clinical aspects, and, withal, failing to respond to any treatment appropriate to those histologic changes known as inflammation. A frozen section examined microscopically during operation would have been invaluable in determining further operative procedure in this case. Although sarcoma was thought to be the pathologic condition present, happily we decided not to attempt its removal, an extirpation that would have sacrificed the whole lower half of the abdominal wall.

The type of inflammation under consideration was described first by Reclus in 1894, under the name of *phlegmone ligneuse* or ligneous phlegmon. Usually occurring in the neck it has rarely been seen in the abdominal wall. The characteristic feature of the disease is its slow, insidious course, developing with board-like hardening of the tissues either limited in extent or involving wide areas. Weeks or even months may elapse before suppuration occurs, during which time none of the usual signs of inflammation are present, only a progressive indurated board-like swelling with sharply defined edges. Histologically the infiltrated area consists of inflammatory exudate with much cellular proliferation and fibrous tissue. Later throughout the mass small foci of suppuration appear. Then the skin is involved and assumes a reddish violet color, resembling the skin covering of a carcinoma. The pyogenic bacteria are usually present, but other germs have been found, those of diphtheria, pneumonia, typhoid, as well as the colon bacillus and ray fungus. Reclus maintains that "the disease is



not caused by a specific microorganism but is probably due to the presence of germs of weakened virulence acting in tissues with high resistance in which unusual barriers and increased cell proliferation are produced." In other words it is an attenuated infection. The disease, however, has occurred usually in weakened and cathectic individuals.

Lang holds to the theory, as does Schmincke, that the disease is epitheliomatous. Merkle in histologic studies of the condition found only leukocytic and lymphocytic infiltration, denying the validity of the cancer theory of Schmincke and citing the fact that these cases run a benign course.

The diagnosis is difficult. Desmoids, carcinomatous and tuberculous infiltration are most likely to be mistaken for ligneous phlegmon. The color of the skin and macroscopic appearance of a section resemble cancer *en cuirasse*. The finding of small pockets of pus throughout the indurated mass may not be of any diagnostic value, as these foci often occur in cancer. Desmoid or fibroma of the abdominal wall resembles ligneous phlegmon in some of its clinical but not in its anatomic manifestation. Desmoids nearly always occur in women after childbirth, arising from the aponeurosis or fascia of the upper abdominal wall. They are localized tumors which may attain the size of a child's head and as they may undergo malignant degeneration they should always be removed.

E. Wyllys Andrews, in a paper on desmoids read before a recent meeting of the Western Surgical Association, reports two cases, one of undoubted desmoid, the other almost identical clinically with the case I am presenting, with the exception that his case, as do most of those reported, followed surgical operation. Because of the resemblance, I will briefly quote from his manuscript:

Male, 35: tedious recovery following herniotomy two months previously. Several months later the groin presented a non-fluctuating tumor, neither tender nor red but filling the false pelvis on the right side, firmly fixed; leukocytes 7,200. Thought to be a deep abscess. No change in several weeks under hot moist dressings. The mass explored. Whole groin tissue a dense fibrous mass of woody hardness with no defined edges but fading imperceptibly into adjoining normal parts. So hard as to resist blunt dissection with fingers. The hardness was due to and accompanied by a sort of edema so that a slight serous oozing appeared. No lymph nodes. No foreign substance found. The mass did not pass behind the peritoneum. No pus or infection found. Wound healed in short time. No result in one month. After that the growth began to recede in prominence and rigidity and had about disappeared in six months.

As to treatment, several measures have been advocated but all have proved to be most unsatisfactory. Excision of the diseased area in the case under discussion would have been out of the question. Hot applications continued over a long

time have been tried. Incision of the abscesses is indicated but the disease does not seem to be influenced one way or the other by such procedure. This I have done several times with some local relief from tension, but in spite of the curet and germicides the disease appears to be running its course of its own accord.

Constitutionally sodium iodid, tonics and hygienic measures should be employed with a view of increasing the resistance of the organism to the infection.

Lately I have begun the use of the staphylococcal bacterins. Unfortunately I have been unable to submit a drop of the discharge for bacteriologic examination so that the bacterins could be employed rationally. The patient at the present time is making slow but satisfactory progress.

Six months later the patient is reported to have fully recovered, thus making the whole course of the disease about two and one-half years.

#### ACUTE PERFORATION OF ILEUM, WITH OPERATION AND RECOVERY \*

W. T. REYNOLDS, M.D.

KANSAS CITY, MO.

*History.*—Patient, male, aged 42 years, barber by trade, was seized on the street on the evening of April 14, by a terrific pain in the abdomen, under a point just above the navel in the middle line; pain radiated down the middle line and onto the penis. At intervals he would experience momentary relief, but when the pain started again it would follow the course just described. During the pain he would lie down and writhe in agony. Examination at once revealed a scaphoid abdomen with board-like rigidity. Upon the advice of Dr. Neal, concurred in by Dr. Armour, he was sent to the hospital immediately for operation with the tentative diagnosis of perforation of the gut, possibly an appendix.

Two weeks before this attack the patient experienced a somewhat milder illness which was diagnosed, tentatively, as appendicitis. The patient, however, had no doctor after the onset and treated himself with purgatives and hot applications. He was in bed one week.

*Past History.*—At about the age of 21 years the patient had typhoid fever, being sick in bed two months, could not work for eight months, and was under "tonic" treatment for eighteen months after the subsidence of the disease. Previous to this he had been healthy and rugged, weighing about 140 lbs. Since having typhoid he has felt weak and thin, and has never weighed more than 130 lbs. Has also been troubled with dyspepsia ever since.

During the attack of typhoid fever the patient was suffering from a coincident gonorrhea, which subsided during the course of the typhoid. He has had multiple ulcers on the penis several times, but does not remember that any of them were hard to the touch. No syphilitic history is present beyond this. He has also had some of the more common diseases of childhood, but they had not affected his general health in the slightest degree.

During the last fifteen years the patient has suffered a rather steady decline in health, and does not remember weighing more than 124 pounds during this time.

\* Read in the Surgical Section of the Missouri State Medical Association at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.

He felt as though he were getting old. Has also been very nervous and easily startled. He is subject to frequent night sweats, often waking in the middle of the night, sweating. He does not think this was due to having too much cover, since he tried to prevent them by having part of the cover removed. His wife has spoken of him often as being feverish and hot. He suffers from heart-burn and allied chest pains, but they have no relation to breathing or muscular movements. He is constipated at times.

Five or six years ago he had attacks of pain in the appendiceal region, which was always relieved by purgatives. The pains did not resemble nor seem to have any apparent connection with the last two attacks of pain described above. Five years ago he had facial erysipelas but no complications. He suffered a rather severe infection of toe and foot six years ago as a result of scratching with the finger nail.

*Family History.*—The mother of the patient died at 62 years of age from a cancer of the face. The father is still living, being very healthy for a man of 82 years. Four brothers and five sisters are living and well. One brother is said to have died of pneumonia in infancy. One sister died of pneumonia, having been healthy up to that time. Another sister died from a cause unknown to the patient at 45 years of age and after a long period of ill health.

The patient has no children. The wife is healthy except for some female disorder. She has been pregnant but twice and both resulted in miscarriage.

I saw this patient after his admission to the hospital three hours after the first attack of pain. He was so much distended at this time that it was practically impossible to outline any of the contents of the abdomen. Under the influence of morphin, which had been given previously, his pulse had steadied down and he was fairly comfortable and free from pain. He was removed to the operating room and the abdomen was opened, a little to the right of the median line. On opening the peritoneal cavity there was at once a rush (probably a pint) of grayish fluid. The appendix was picked up and examined and while inflamed did not account for the condition. A coil of the ileum was then picked and followed downward to a point just above the sigmoid, and firmly adherent to the lower pelvic wall, the ileum was apparently kinked on itself. By blunt dissection this coil was dissected loose and rapidly brought outside the abdomen. At a point in the central portion of the kink there was discovered at once a perforation with gas and feces escaping; the ileum at this point felt hard and indurated and was very much discolored above and below the perforation, for perhaps 3 or 4 inches. An excision of this portion of the gut was promptly done and a side-to-side anastomosis made, a large cigarette drain inserted to the bottom of the left pelvis and the patient returned to bed. A proctoclysis was at once started. The drain was removed in a few days and aside from a slight skin infection the patient made a very uneventful recovery.

*PATHOLOGIC REPORT BY DR. DARWIN DELAP*

Section at the site of the perforation shows an acute purulent infiltration and edema with a slight area of desquamation of the lining epi-

thelium. Small tubercles are present, showing typical granulation tissue with its giant and epithelioid cells, and the condition of avascularity. In some places the endothelium lining the capillaries shows marked proliferation, blocking the circulation.

The lining of the intestine is intact except at the site of perforation. The outer surface of the coil shows a marked protuberance opposite the site of perforation and in contact with it before being molested. It, however, shows no tubercles on section. The perforation was in all probability caused by adhesions which kinked the gut, causing strangulation and local edema, the perforation occurring at the weakened tuberculous area. That this is the case is shown by the fact that none of the tuberculous areas have become confluent or have advanced sufficiently to the stage of coagulation necrosis to, of itself, produce a perforation.

309-10 Argyle Building.

#### JOINT TUBERCULOSIS, WITH SPECIAL REFERENCE TO THE USE OF FORMALIN-GLYCERIN INJECTION \*

ROLAND HILL, M.D., C.M.  
ST. LOUIS

In order to have a proper conception of a tuberculous joint we must regard it as a local manifestation of tuberculosis in a patient with a marked tuberculous tendency. In other words, joint tuberculosis is simply a local manifestation of a general condition depending on a constitutional and an exciting cause.

It is a well-established fact that a slight injury to a joint may be the determining factor of a tuberculous arthritis of a more or less destructive character. In a case of this kind the patient already has tubercle bacilli in the system and the bruise leads to a lowering of the vitality of the part, which favors its invasion by the germs.

If the condition is recognized early and measures taken to increase both the general and local resistance of the patient, the phagocytosis produced as a result of the tuberculous invasion may be sufficient to destroy the focus.

The great majority of tuberculous joints, however, are regarded by the patients as sprains or rheumatic conditions; and not infrequently the most serious changes have taken place before the patient seeks relief through the services of the surgeon. It is not uncommon for these cases to go on to suppuration or bone destruction, with shortening of a limb, before the patient realizes his condition.

Tuberculous disease usually attacks the epiphyseal ends of the bones or the synovial membrane.

\* Read in the Surgical Section of the Missouri State Medical Association at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.



The diagnosis of tuberculous joint disease depends on several cardinal factors:

1. Physical examination of the patient.
2. Examination of the affected part by the x-ray.
3. The use of Koch's tuberculin producing the well-known typical pathogenic reaction.

In those early cases where synovial involvement predominates, the joint is greatly thickened and there is often a great effusion of fluid into the joint cavity.

At times, though rarely, tubercle bacilli may be found by microscopic examination of the secretion of an infected joint.

Radiographic examination is most important as a diagnostic aid and usually shows rarefaction in one of the epiphyseal ends. The most certain test that we have, however, of a definite tuberculous lesion is the use of Koch's tuberculin used hypodermically.

In a case of this character, to make the diagnosis absolutely positive, the patient must give not only a constitutional but a local reaction as well.

The constitutional reaction is manifested by a rise of temperature, with its accompanying malaise. A local reaction is shown by an exaggeration of the local symptoms. In the treatment of these affections the pendulum is swinging toward conservation.

The fact that the majority of people who die show some sign of having had an old, healed, tuberculous focus, tends to make us rely more than ever on the powers of the patient.

Nature gives us many valuable hints that we must not ignore in the treatment of these lesions:

1. She first makes the joint stiff, and then makes it painful, showing that first and foremost rest is demanded. In fact in this, as in all other inflammations, rest is most essential.

2. It is very necessary that the rest be carried to the extent of relieving the part from weight or strain.

3. Good constitutional treatment is demanded—and under this head may be included the careful use of Koch's tuberculin to increase the opsonic index.

4. Certain substances have been found of value when injected into the joint cavity.

5. In cases where there is necrotic bone, it must be removed.

It is not my purpose to deal with the treatment of tuberculous diseases of joints that have gone to the extent of hopeless ruin of the joint, but rather to deal with those cases of earlier stages when the lesions are still amenable to conservative means.

In the early stages absolute rest of the part as obtained by immobilization and the use of crutches will give prompt relief and prove curative in a large percentage of cases.

In those cases with marked swelling, pain, jerking and effusion, the iodoform emulsion was used quite extensively for a long time and gave good results in many cases. More recently this same class of cases has been treated by a preparation of formalin and glycerin, as first recommended by Murphy. This preparation probably acts along the same lines as the emulsion of iodoform and glycerin that has been so extensively used for many years.

For the rules governing these injections I am indebted to Dr. Murphy. He says that a large exploring needle should be used as it is hard to inject glycerin through a very small needle. The syringe should be strong and tight, or it may break from the amount of force necessary.

The solution should be 2 per cent. formalin and 98 per cent. glycerin, and is mixed at least twenty-four hours before being used.

The quantity, as recommended by Murphy, should be 2 drams in the ankle and 4 drams in the knee, other joints in proportion. A firm Buck's extension is applied immediately after the operation and carried for some time after the first injections.

Morphin may possibly be required if the after-pain is very intense. Ice applications may be made for a day or two if there is much reaction. It is essential that fluid in the joint should be aspirated, and that no air should be admitted with the injection. In some very nervous cases an anesthetic may be needed.

The advantage pertaining to any agent that will cure a tuberculous arthritis without opening the joint cavity widely is obvious. While the dangers of the open operation on a joint are not to-day nearly so great as before the period of antiseptics, still one may get an infection, or if not this unfortunate accident, some impairment of motion may remain.

My personal experience with formalin and glycerin, while very small, extends over about two years and is such as to convince me that we have a decidedly helpful agent in this most refractory class of cases. The use of formalin and glycerin injections is of great value in cases with effusion into the joint cavity.

In these cases the secretion rapidly diminishes and it changes markedly in its character. If it is turbid it gradually becomes more serous in consistency and in suitable cases will cease to form altogether. With this check of the fluid formation in the joint there is a very marked improvement in other local symptoms.

The pain, tenderness and spasmodic jerkings disappear and the thickening and tenderness gradually subside. The number of injections needed to secure this result varies greatly, according to the severity of the infection. In one knee-joint with great effusion and tenderness I made fourteen aspirations and injections before the joint symptoms entirely abated. In the average

case marked improvement should follow after the use of three or four injections.

What place this treatment is to hold in the joint therapy of the future is to-day uncertain, but I believe it will be found permanent in the treatment of these lesions. At present there is no literature on the subject; but personal communications with Murphy, Beck and Mayo show that these men are using it with distinctly satisfactory results. The Mayos have used it most extensively in their clinic during the past few years, and Murphy is most emphatic and eulogistic as to its value. Another method of treating tuberculous joints with sinus formations is by injecting bismuth paste, first suggested by Dr. Emil Beck of Chicago. This certainly has a marked effect on tuberculous processes and has attracted so much attention that Beck has recently contributed a paper on the subject before the German surgeons.

In conclusion I may state that no treatment of a joint lesion will be entirely successful that does not pay the greatest attention to such cardinal factors as rest, or rest with extension.

In conjunction with specific local treatment, the tentative use of Koch's old tuberculin proved of decided value in many cases, but it must always be closely watched because of a tendency to light up some latent focus that may do great harm. Measures to increase the systematic resistance are of cardinal importance.

These patients require the best of food, plenty of light, fresh air and tonics to improve in every way their vitality. If these measures are adopted it is astonishing to see how cases that promise to be most refractory respond to treatment and escape the employment of other and more radical methods.

#### THE EARLY CARE OF ACUTE ABDOMINAL CONDITIONS\*

WILLIAM THOMAS COUGHLIN, M.D.  
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By acute abdominal conditions I mean all conditions sudden in onset, characterized clinically by pain in the abdomen associated with any or all of the following symptoms: nausea, vomiting, constipation (either absolute from the beginning or coming on later), rigidity of the abdomen or distention or tenderness of the same accompanied by shock, collapse or elevated temperature.

It may seem strange to offer this paper to you and I fear that perhaps I may offend the sense of some in so doing since herein is nothing new. However, even at the risk of boring you I am

going to reiterate old and well-established ideas. This work may resemble that of "carrying coals to Newcastle," but every general surgeon here and elsewhere can and will vouch for the truth of the assertion that many lives are annually sacrificed because of improper first treatment in these conditions. And, strange though it may seem, very often that improper first treatment is prescribed not by lay persons, but by persons licensed by the law to practice medicine.

In the past year I have seen six fatal cases of acute diffuse peritonitis which I am reasonably certain might have been prevented by attention to the injunction "*primum non nocere*." I hope no one understands me to say that acute diffuse peritonitis is always caused by treatment previously administered: certain cases, however, are so produced. In all of the cases to which I refer above early medical advice had been sought and followed. Now what has been my experience must surely be proportionately that of every surgeon.

There is one particular form of improper treatment to which I shall direct attention, and that special form causes more harm than all the others together. I refer to the giving of a purge to every patient who has a pain in the abdomen. In the cases above alluded to, not only were initial purgatives given but in several instances the wrong was persisted in and more drastic purgatives ordered as the case progressed. In one case croton oil had been used. In this case two practitioners "worked two days trying to get the bowels to move." This seems incredible but it is quite true.

Certainly there are conditions in which a brisk purge is indicated, but then there are many more in which purgation is emphatically contraindicated. I do not intend to take up the differential diagnosis of these conditions. Most of you are very likely as familiar with such diagnosis as I am myself. I do, however, urge that you speak of this subject occasionally to those whom you know to have—may I say it?—the purgation habit. That you influence them when called to such cases to take time and pains to make an examination of the patient. One who takes a little time to make a diagnosis very rarely if ever improperly treats a patient.

Never in my opinion should a physician order an *immediate* purgative when called to a patient suffering with pain in the abdomen. It matters not whether he be *sure* that he *knows* a purge is indicated, the purge should be withheld for a while. True, a purgative may be just what is needed; if this be so then no great harm can come to his patient by waiting a few hours.

Let him relieve the pain if he must, but let him never give an opiate before he is quite certain of his diagnosis. There are many other ways of relieving the abdominal pain which may be cured by a purgative.

\* Read in the General Session of the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.



Now suppose it be not a case of simple colic but an acute appendicitis, a volvulus, a perforated ulcer or a strangulated hernia, what of a purgative? If one be given, Nature's effort to wall off the diseased area will be frustrated, for a purgative causes turmoil and unrest in the abdominal cavity and nature cannot build her protecting wall unless the neighboring coils of bowel be kept at rest. Not only this but the increased movement spreads the infection far from its original site. The first essential to limitation of the spread of infection is rest to the injured and adjacent parts. And will a purgative cure a volvulus, a strangulation or an intussusception? It never can, but it can and it does always make the condition far worse.

If one must do something (and one must) let him give an enema. And if he feels that the patient ought to have medicine let him give the medicine with the enema. One cannot do much harm with an enema unless one use too much fluid or too much force. An enema properly administered may be quite sufficient to cure the case. Do not hastily give medicine or food by mouth but above all things, do not give a purge.

One may rest assured that a patient curable by a purge will not die because that purge is withheld for a while and one may be just as certain in the other cases, that if his purge fails to kill the patient it is, as Ricord used to say of a certain patient's failure to contract a certain disease, "because God protects him."

Metropolitan Building.

#### THE ASCENDING COLON\*

JOHN M. BELL, M.D.

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The ascending colon is an anatomic entity neglected by the general practitioner and ignored by surgeons. It is seldom considered a source of disease by either faction of medical men. Surgeons in particular are prone to ascribe all lesions occurring in the right hypogastrium either to the appendix or the gall-bladder, entirely overlooking the ascending colon with its cecum below and hepatic flexure above, a territory very prolific of lesions most of which should be met by the internist. In looking over my reports I find a number of these cases, some of which came to me with a sear of appendectomy which had failed to relieve the symptoms. A study of the physiology of this region will enable us to appreciate its pathology. The stomach is largely a hopper wherein foodstuffs taken at convenient hours are retained and prepared for digestion proper in the

duodenum, and into which the food is paid out in small quantities as the organ is ready for its reception. From the stomach there is practically nothing absorbed, merely alcohol and crystalline bodies. Into the duodenum are poured the essential digestive ferments and here, with the aid of the jejunum and ileum the ultimate chemical changes are effected so that absorption is made possible. The contents of this small intestine are always fluid; and observe too, this fluid largely maintains its bulk all along the small intestines until the cecum is reached, when it disappears. Foodstuffs as they become altered chemically along this watery trough are precipitated in the valvulae conniventes and absorbed, while the fluid bulk itself is largely passed on to the cecum where it finally disappears by absorption. As Mays has said, we do our drinking from the cecum.

In the ascending colon the contents are no longer watery, but rather mushy, owing to the eagerness with which the cecum absorbs fluid. Under normal conditions, i. e., good peristalsis and normal muscular tonicity, colon contents pass freely up the ascending colon, along the transverse and down the descending without embarrassment, all the while becoming dryer and dryer. The cecum and lower part of the ascending colon are extremely vascular and are abundantly supplied with absorbent vessels, so much so that it becomes a query why more decomposition products are not absorbed than is observed, especially since these bodies are created largely in the ileum. There are two factors which contribute to pathology of the ascending colon: first, what might be called an overacting cecum in which the faculty for absorption is abnormal in intensity, leaving the fecal contents of the ascending colon unduly dry; second, atonicity, lack of muscular tone, deficient peristalsis, which create a somewhat chronic state of impaction in the ascending colon. There is another factor, which in the presence of this symptom-complex aggravates the trouble, that is, reverse peristalsis. Mays was one of the first to speak of this physiologic peculiarity, a peristaltic wave from the rectum through the entire large colon. The cecum then becomes the point of impact, if I may use the word, of onward peristalsis from above as well as the reverse wave from below. In the ascending colon this serves the purpose of preventing a loss of food values, for the bowel contents at this point still contain some nutrition which escaped absorption in the small intestine, foodstuffs reach the cecum in about five hours, and are retained in the large colon about eighteen hours.

During the past three or four years, in which time I have devoted my attention to the digestive tract, I have been surprised at the large number of cases of weakened, dilated, ascending colons. It makes me regret the disuse of the old term

\* Read in the Surgical Section of the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.

typhlitis and perityphlitis so much in vogue twenty years ago. These terms called attention to the colon but now the term appendicitis is all-absorbing, and the glare of the word makes us forget all else in the lower right iliac region. The sausage-like mass is still there in many cases and when the patient is put on the table the mass is easily palpable and may be moved upward in the colon past the hepatic flexure. I have at present three patients who have learned to detect it and can move it themselves. Several months ago with a similar number under treatment two had scars of appendectomy which had not relieved them. These patients have periods of pain, with marked tenderness, constipation, impaction of the ascending colon, and some temperature. They can be relieved by a colon irrigation and cured by proper treatment. I do not want to be misunderstood on this point. I make no cry against appendectomy; I advocate it when needed; I do, however, want to call your attention to the fact that the appendix does not occupy the whole right iliac region. By means of colon irrigation, with gentle massage, the ascending colon may be filled with salt solution, and by percussion the outline of the dilated organ can easily be discerned. It would be a matter of interest to determine how frequently this condition exists: it may be done by counting scars. In my experience I have met six of the cases.

Another source of trouble is the kink at the hepatic flexure, the result of a badly prolapsed transverse colon. This is always associated with general relaxation as well as dilatation. The remedy is a surgical one. Colon irrigation with massage ameliorates the condition greatly but will not dispose of it permanently. Although patients object to surgery when the only severe symptom is constipation I think education to this end has its effect, for I have observed two cases in recent years that afterward went to the surgeon for permanent relief. Constipation is so indifferently treated by the profession at large that surgical relief seems foreign and far-fetched by the average patient. A proper diagnosis with education will eventually overcome this misconception.

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#### THE CORNELIUS TREATMENT FOR PERIPHERAL NERVE DISEASES

With Report of a Case \*

ELIZABETH BENTELE, M.D.  
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On my trip to Europe, 1908 and 1909, and while studying in Berlin, my attention was called to a peculiar and specific method in dealing with

peripheral nerve troubles, originated by Oberstabsarzt Dr. Cornelius and taught to practitioners in one of the clinics at the Charité. I became intensely interested in the work done there and arranged at once for a practical course in Dr. Cornelius' clinic. During this time I treated daily from ten to twelve patients and had an opportunity of observing the course and results of the treatments, not only in my own patients but also in those treated by six other physicians working there at the same time.

Dr. Cornelius introduced his treatment about fifteen years ago and it was only after proving during a number of years the extreme usefulness and efficiency of his method that he conquered his standing in the profession. For the last five years Dr. Cornelius has been conducting a free clinic at the Charité for the training of physicians. The large number of patients seeking relief made it necessary last winter to increase the number of treatment rooms.

The Cornelius treatment is based on the existence of painful nerve-points the pressure on which will produce pain—a pressure of medium strength which in a healthy individual will be felt as pressure only not as pain. Therefore, a nerve-point is a point of the skin where the reaction is out of proportion to the amount of stimulation or a point of morbid nervous irritability. These nerve-points are subject to irritation by causes which in the normal individual do not produce any reaction at all—as the pull of muscular contraction, differences in the blood-supply (congestion or anemia), fluctuations of the atmospheric pressure, humidity and temperature, physical or mental exertion, etc. The nerve-point may be either centrally or peripherally located and its manifestations vary accordingly. If the nerve-point sends its impulse centripetally toward the brain its irritation causes sensory or reflex phenomena; if the nerve-point is centrally located and sends its impulse centrifugally toward the periphery the symptoms are of sensory, motor, vasomotor or secretory nature. If the stimulation originates from disease or irritation of the brain or spinal cord, the Cornelius treatment cannot reach it and is of no use. Therefore we have only to deal with those diseases in which the symptoms are the result of a morbid condition of the peripheral nerves, and of these the sensory nerves, with their painful nerve-points, are of main importance both in the production of the symptoms and in their cure. The nerve-points are found in the skin, the muscles, the joints, the nerve trunks and also in the intestines.

Cornelius distinguishes three classes of nerve-points:

- (1) Those the pressure on which produces local pain only.

\* Read before the Missouri State Medical Society, May 16, 1911.



- (2) Those from which the pain radiates along the same nerve trunk.
- (3) Those from which the pain radiates to the opposite side or some other part of the body.

The radiation from these nerve-points does not seem to follow any known anatomic law but to be rather arbitrary. Yet we will always find another nerve-point at the spot to which the pain was radiating.

As to the origin of the nerve-points, Cornelius advances the following theory: that chronic neuritis—being the underlying cause of a great variety of nerve troubles and pains—is a form of peripheral nerve disease caused by a merely mechanical impediment in the course of a nerve. This obstacle may be the result of an acute swelling (effusion of blood or serum) along the nerve filaments themselves, or it may be a chronic condition due to connective tissue formation constricting the nerve or pressing on it.

These formations may be so minute as to be difficult to demonstrate by the microscope and yet they may be so multiple and so effective as to cause the most severe pain. The greatest difficulty in trying to prove this theory lies in the fact that these patients do not die of their nerve troubles and therefore cannot be studied on the autopsy table by the specialist interested in this particular feature of their disease, but are either cured or drift away and die later from some other cause under some other physician's care. If you will permit me, I should like to repeat a similar theory for the explanation of the causation of nerve-pains, advanced in late years by Dr. R. T. Morris of New York, concerning chronic appendicitis. In his article "Further Notes on Harmful Involution of the Appendix," he says: "The irritation caused by the engagement of the nerve filaments in contracting connective tissue leads to two distinct sets of symptoms—sensory and reflex." This holds good not only for the appendix alone but may be generalized and applied to all peripheral nerves.

Cornelius claims two facts as being in favor of his theory:

- (1) That one almost always succeeds in curing a peripherally located nerve-point by appropriate "mechanical" treatment.
- (2) That especially scars in a large number of cases form the starting point of such nerve pain.

The German universities are a fruitful soil for the study of scars, which, as a result of the duel custom among the students, are so frequently seen crossing their faces and are especially apt to produce sensory phenomena in the skin of the face richly provided with nerves. These scars consisting of dense connective tissue are bound to exert a certain pressure or pull on their more sensitive surroundings. It is not by any means necessary that such scars be the consequence of some external injury. Contusions, bone frac-

tures, dislocations, intramuscular or intraneural hemorrhages, a constant pressure or pull—all may be causes of large, small or minute scar formations inside the muscle, in the neighborhood of nerves. For instance, the pains of muscular rheumatism, as lumbago, may occur in acute or chronic form. The acute condition being due to sudden effusions through rents in the muscle on mechanical basis; the chronic form to lack of complete absorption and consequent organization of such effusions. Among other causes for scar formation Cornelius refers to gout, syphilis, diabetes, arteriosclerosis, chronic poisoning (lead, arsenic, mercury, alcohol), and, in women especially, chlorosis. But whatever the cause may be, Cornelius considers each nerve-point as the consequence of a mechanical impediment of the nerve filament, caused by a lesion of the surrounding tissue. I found by experience that a number of nerve-points have a definite location which corresponds to the point of exit of the main nerve trunk or branch from the skull or from underneath a muscle, that is, to the place where it becomes superficial. In some cases, as for instance in neurasthenia, the whole surface of the body may be covered with nerve-points, and then a cure is much more difficult and protracted than in conditions where the nerve-points are fewer and more definite even if far more painful. Of course, Cornelius does not think that the final word on this subject has been spoken, but so far his theory seems to explain the facts most satisfactorily.

I should like to call attention to another point, namely: the lesions of chronic neuritis, being of the productive type, do not disappear with the removal of the cause and require special treatment.

The importance and intensity of the nerve-points is a varying one. To most patients their existence will be absolutely unknown and will cause, when demonstrated, a perfect surprise. Some patients may experience in the affected part only weakness, a tired feeling and numbness on slightest exertion. Again others will have attacks of sharp, shooting pains, or will continually be haunted by a dull sordid pain which makes them unfit for mental or physical work. The amount of discomfort up to the severest pain a patient experiences depends on the number and intensity of such nerve-points. Cornelius has found as many as 500 of them in one patient, with about 100 on the head alone. These nerve-points are not all simultaneously excited, and on first examination one will only discover part of them; frequently new ones will arise later during the course of treatment.

I should like to call attention to this treatment as an excellent means of diagnosis, because all merely centrally located nerve troubles will show an absolute absence of painful points, while on

the other hand, many a sharp pain, believed to be caused by the appendix or ovaries, can be demonstrated as located in the abdominal wall by lifting the latter and pressing with the finger-tip down on it; thus sometimes preventing an unnecessary operation. In Germany the diagnostic value of this treatment is especially appreciated by the army physicians, as there are among the soldiers a number of malingerers pretending to have all sorts of pains in order to escape some heavy exercise. An examination for nerve-points will disclose the deceit as the patients, not knowing what the examination means, will not react to the pressure neither voluntarily nor involuntarily unless the pain is real.

As to the treatment of "peripheral nerve troubles" Cornelius wants:

- (1) The conditions treated and removed which lead to the formation of nerve-points.
- (2) The resistance of the body against irritation increased.
- (3) The nerve-points treated.

If you will permit me, I shall only consider the last request, the treatment of the nerve-points. Cornelius concludes that, if these painful spots have a mechanical basis, there must be also mechanical means for their removal, which he discovered in a certain kind of pressure directly applied over the painful spot. The explanation offered for the curative effect of such treatment is, that through the strong and often repeated pressure the constricting connective tissue is gradually loosened and broken up, by this means freeing the nerve and removing the cause of pain. Cornelius treated successfully sciatica, facial and intercostal neuralgia, heart neuroses, neurasthenia, hysteria, migraine, painful scars, occupation neuroses, cases of so-called rheumatism, etc.

Without going into further details of the treatment itself, I shall present to you the course of a case of trifacial neuralgia of the right side and intercostal neuralgia especially pronounced in the back. Very soon after my arrival in St. Louis in November, 1909, I became acquainted, through the kindness of Dr. Mary McLean, with Dr. A. B., who was willing to submit to the treatment. Dr. B.'s history, as far as it interests us, is the following:

Twenty years ago she had a severe attack of neuralgia involving the superior dental branches of the right trigeminus which subsided after the extirpation of one healthy tooth. These attacks recurred and became more frequent about five years ago then involving the ophthalmic division. About six years ago a steadily increasing intercostal neuralgia developed. Also, two years later a fibroid tumor was discovered and this, together with a chronic adherent appendix was removed through operation by Dr. Mary McLean. The neuralgic pains subsided for a short period and returned with increased severity. Especially the

backache involving the dorsal region from the second to the eighth dorsal nerve of the right side was almost intolerable. Several physicians of this city treated Dr. B. until the time of my arrival without affording her permanent relief. On examination I found edema of the hands and feet with normal urinary findings and an anatomically normal heart, but which showed nervous symptoms, the patient suffering frequently from palpitation and occasional attacks at night simulating angina pectoris. A lichen planus, which first appeared at the end of September, 1909, involved the right wrist, the flexor side of the elbow joints, both axillæ and both thighs. The abdominal scar showed keloid formation and was extremely sensitive to the touch, causing the patient much distress. An examination for nerve-points showed twenty-two about the head, involving all three branches of the fifth nerve on both sides and the great occipital nerve mainly on the right side, and seventy-eight about the chest, neck, back and upper arms, all of them highly irritated and sensitive. The treatments were begun on Dec. 13, 1909, and given five or six times a week. After thirty-three treatments the patient's sleep, which had been very poor and frequently interrupted by the gnawing backache, began to improve, becoming more prolonged and deeper. At this same time the palpitation of the heart and the edema of the hands and feet disappeared entirely and the neuralgia was less severe. As a curious and unexplained incident it may be mentioned that at the thirty-third treatment, fourteen new nerve-points appeared along the right rectus muscle and the costal arch, which disappeared again on March 5, at the fifty-ninth treatment. The improvement in the neuralgic pains in face and back was slow but constant with occasional slight attacks after physical or mental strain. At the beginning of April, 1910, the eruption of the lichen planus began to annoy the patient very much. A skin specialist treated her but the eruption did not subside until September, 1910, after having persisted a year. The nerve treatments were stopped on May 24, after the patient had received eighty-nine treatments. Dr. B. was so much improved that she could go East for the summer, being for several months absolutely free from pain. Unfortunately for her a close relative was taken ill in July and since then she has lived under the severest physical and mental strain, getting frequently for days in succession not more than two hours sleep, so that she broke down about Christmas time after having remained well for six months under the most trying circumstances.

The patient presented herself again for treatment. The nerve-points at present are less in number, but extremely irritated. There is prospect of relieving her in a short time.

514 Metropolitan Building.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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### EDITORIALS

#### THE NATIONAL FORMULARY, PHARMACEUTICALLY USEFUL BUT NOT A THERAPEUTIC NECESSITY

The National Formulary was conceived at a time when it was not uncommon for a physician to combine a half dozen fluidextracts in one prescription, when the druggist carried twenty-five or more different kinds of quinin, iron and strychnin pills, and when it was considered the proper thing to prescribe salts such as potassium bromid in the form of sickening sweet-salty, hair-oil flavored, brilliantly colored elixirs. There were no standard formulas for these fluidextracts, pills and elixirs; therefore each pharmacist was obliged to use his judgment in their preparation. As it was likely that one pharmacist might flavor his elixir with a combination of cloves and cinnamon and color it yellow, and another flavor it with orange peel and coriander and color it red; and as the same patient might get his prescription filled alternately at these two stores, we may imagine to what annoyances the pharmacist was subjected. In this dilemma the National Formulary was devised. As a result all pharmacists to-day use the same alcoholic menstruum in making their fluidextracts of fleabane, pipsissewa and other indifferent drugs which a few physicians still use occasionally; they make their pills of a certain size and with a certain coating; they impart the same color and flavor to the potassium bromid elixir used by certain physicians who forget their teachers' advice and still prescribe the drug in the form of this nasty mixture. The National Formulary may therefore be designated as pharmaceutically useful.

We hold, however, that the book is not a therapeutic necessity. The physician who can get along without it is to be congratulated. The many complex formulas contained in it are a credit neither to the pharmacists who devised them nor to the physicians who prescribe them. In these days of scientific thought, when physicians want to know the effect produced by each drug given and hence abstain from prescribing the old, hopeless confusions formerly in vogue, there is little need for the most of the ready-made things in the book.

When we learned some time ago that the book was in process of revision, we were anxious to learn whether the new edition promised to be more acceptable to physicians. While a report<sup>1</sup> giving the scope of the next edition indicates that some of the worst combinations have been dropped, we find among the new admissions, preparations of the following drugs whose only value appears to lie in the confusion which they create in the minds of physicians when they are constituents of shot-gun proprietaries: baptisia, ephedranthus, condurango, coeilliana, dioscorea, drosera, echinacea, euphorbia pilulifera, helonias, cataria (catnip), senecio (fleabane), trifolium, cactus grandiflorus and passiflora. The list of additions also contains the following complex, unscientific and superfluous preparations: elixir formates; elixir formates compound; elixir glycerophosphates compound; elixir sodium salicylate compound; elixir of three bromides and solution of the bromides of gold, arsenic and mercury. Furthermore, there are a number of formulas that are evident imitations of notorious nostrums which the "N. F. propaganda pharmacist" will no doubt attempt to persuade physicians to prescribe.

Finally we note that, although liquid preparations of pepsin and pancreatin are acknowledged to be pharmaceutical impossibilities, and in spite of a specific appeal from the Council on Pharmacy and Chemistry of the American Pharmaceutical Association to omit elixir digestivum compositum, the worthless imitation of a popular humbug, from the next edition, it apparently has been decided to retain this preparation. Thus, we are forced to conclude that the National Formulary, though pharmaceutically useful, is not a therapeutic necessity—in fact, therapeutics would be better off without it.

#### "QUIET ZONES" FOR SCHOOLS

The Society for the Suppression of Unnecessary Noises, of New York, is endeavoring to have "quiet zones" for public schools established in that city. Some years ago this same society made an appeal for quiet zones for hospitals with eminent success, New York taking it up enthusiastically to be followed by scores of other cities in the country.

In the *Forum* for December appears an article by Mrs. Isaac L. Rice, president of the Society for the Suppression of Unnecessary Noises. In prefacing her paper Mrs. Rice says: "There is a most important feature of school sanitation which, up to the present, has not been recognized, namely, the urgent need of protecting the young from the injurious effect of outside noise, which, by rendering concentration difficult, increases the mental effort required for school tasks, and by

1. *Pharm. Era.*, October, 1911, p. 437.

preventing ventilation, menaces the physical well-being of the child. This is a matter so grave and so far reaching in its consequences that its utter neglect is little short of incredible."

Mrs. Rice depicts in startling lines the conditions that obtain in most of our large centers and in many of the smaller towns. Letters from all quarters are quoted to substantiate her story. We might think the tale overdrawn had we not some first-hand testimony ourselves in the matter. Only recently we learned from the principal of a large public school in St. Louis that the effect of the daily noise and confusion occasioned by street cars alone made the closing of windows imperative, caused much loss of time through interrupted recitations, frequent interference with ventilation, and an exhausting and enervating nervous tension in teachers and pupils.

Hypercritics might regard this movement as an entirely superfluous activity but the conclusion reached by competent investigators proves beyond controversion that there is absolutely not the slightest excuse for a large percentage of disturbances of this sort; furthermore, that these disturbances produce injurious effects on the nervous systems of children.

Where no legal restraints control these kinds of noises they should be speedily provided. Of course the school-house is but one of the points where these tumults work injury, but the corrective effort must begin somewhere and the school-house is the logical place from which to initiate the crusade, and the children should receive the first benefits of the movement.

The Society has earned the approbation of the people for the results already achieved in creating quiet zones for hospitals, and should receive every encouragement for its future success in suppressing the incessant babel that continually ascends from the streets of our cities.

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## EUGENICS

Eugenics, or the science that undertakes to regulate the mating of human beings with a view to procuring the fittest parents and the fittest possible offspring, is at last being taken seriously. For long it was regarded as a fad, but the fantastic has been outgrown.

The complexities of our modern life make it imperative that some consideration be given to the prospects of the race. By differential scrutiny of those who would become parents eugenics proposes to aid future generations through subjecting prospective parents to a measure or test of fitness for the responsibilities of procreators of the race, viewing these obligations from the standpoint of the child, the parents themselves and society.

The ne plus ultra of eugenics is not near at hand. Indeed, the realization of its horizon's

breadth has just come to us. Eugenics is both sociologic and pathologic; it concerns itself with what a man was three generations ago as well as with what he is to-day; it scans the history of his antecedents with eagerness equal to the interest with which it listens to his own story. Nothing that affects man is without value to the eugenicist; nothing is impertinent.

As the interest in the subject quickens there comes a gleam of hope, faint gleam though it now be, that perhaps from out of this intimate contemplation of the fathers and mothers of the next generation may evolve a solution for certain of the perplexities that embarrass us to-day—the appalling pauperisms, the mental and moral teratologies that crowd everywhere on our sight and consciousness.

Within recent years eugenics has broadened vastly and assumed proportions that bespeak its fitness to grapple with the questions of the time. Eugenics will yet be called on to speak a word as to the laws and statutes, but that time is not yet. In the interim let those whose interest is with it beset themselves with still greater zeal to the tasks that confront this new study.

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## PAPERS FOR THE FIFTY-FOURTH ANNUAL MEETING

The program committee is now collecting papers and arranging for the scientific work of the fifty-fourth annual meeting, to be held at Sedalia, May 21, 22, 23. Members who desire to present papers should address the section officers and give the title of the paper.

It should be remembered that the scientific work is divided among the various sections—the medical section, the surgical section and the general sessions. When making requests for a place on the program members should inform the committee not only of the title of the paper but also in what section it is intended the paper should be read.

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## ANNUAL DUES NOW PAYABLE

Members are urged to pay their dues promptly in order that they may enjoy without interruption all the benefits and privileges of membership. Many of the county societies have sent in their reports for 1912 and a large percentage of the members have paid their dues for this year. A few members still owe for 1911 and these dues must be paid along with 1912 dues in order to retain good standing. All members who fail to pay their dues promptly after January 1 stand suspended and cannot participate in any of the privileges of membership until all dues have been paid. Furthermore, only those members who



have paid their dues are recognized as in good standing by the American Medical Association; therefore delinquent members are regarded as non-members and their names will appear in small type in the forthcoming directory, indicating that they do not belong to the county or state associations. We urge all those who have not yet paid their dues to remit at once to the county secretary.

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### INDEPENDENT JOURNAL JOINS THE REFORM

One of the most important of the special journals has declared its intention to restrict all advertisements of pharmaceuticals to the products approved by the Council on Pharmacy and Chemistry of the American Medical Association; the journal is *Surgery, Gynecology and Obstetrics*, published at Chicago. This makes three independent medical journals adhering to the policy of advertising only those pharmaceutical products that meet the standard set by the Council on Pharmacy and Chemistry—*Surgery, Gynecology and Obstetrics*, *Southern Medical Journal*, and *Cleveland Medical Journal*.

It is a matter of regret that some of the state association journals have failed to adopt this policy.

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### DR. WILEY VINDICATED AGAIN

The vindication of Dr. Wiley by the committee of the House of Representatives appointed to investigate his conduct of the Bureau of Chemistry, coming at this time when the enemies of public health are actively engaged in endeavoring to discredit the chief chemist and destroy his effective work against food adulterators, constitutes a deserved rebuke to the kind of interests and the kind of people that are arrayed against him.

This vindication was the only possible outcome of an investigation whose moving spirit was sincere and undominated by any motive save interest in the well-being of the people.

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## EDITORIAL NOTES

THE directory of the American Medical Association is now being compiled and will be ready for distribution in a short while. This edition will contain full information of the standing of physicians, lists of hospitals, members of county and state societies, and various classifications and data of value to the whole profession.

CONTRACTS for the new buildings of the medical department of Washington University will be let at an early date. They will be located across the street from the new Barnes Hospital and will cost about \$800,000.

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CONTRACTS for the erection of the Barnes Hospital in St. Louis have been awarded and work will begin early in the spring. A group of six buildings will be erected at once and others will be built later. The cost of the buildings to be erected this year will be over \$800,000. They will be located on Kingshighway, Scott and Euclid Avenues.

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THE common drinking-cup, combs, brushes and roller towels on railroad trains in Missouri will be discontinued after March 1. According to dispatches in newspapers the order to abolish these articles on that date was issued by the state board of health at its January meeting. The railroad companies, it is said, have signified their willingness to obey the order.

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ANY member failing to receive his copy of THE JOURNAL regularly is urged to notify the editor at once. Only when complaint is made in this way can the cause of the irregularity be ascertained and in the absence of such notice it is assumed that THE JOURNAL is reaching its destination regularly. We welcome all notices of changed addresses and information that will assist in correct delivery.

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SINCE December 1 the following articles have been accepted by the Council for New and Non-official Remedies:

Ciose (Fairchild Bros. & Foster).  
 Bacillary Milk (Fairchild Bros. & Foster).  
 Lactampoule (Fairchild Bros. & Foster).  
 Propaesin (Parmele Pharmacal Co.).  
 Dextri-Maltose (Mead, Johnson & Co.).  
 Enemose (Fairchild Bros. & Foster).

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THE ninth annual Red Cross conference will be held in Washington, D. C., May 7 to 17. The exhibition in connection with the conference will be divided into two sections which will be styled Marie Feodorovna and general. The former is a prize competition, with prizes aggregating 18,000 rubles, or approximately \$9,000, divided into nine prizes, one of 6,000 rubles (approximately \$3,000), two of 3,000 rubles each, and six of 1,000 rubles each. The subjects of the competition and full information may be obtained by addressing the chairman of the exhibition committee, American Red Cross, Washington, D. C.

THE American Hospital Association has issued a leaflet announcing in brief fashion the objects and purposes of the organization and detailing some of the improvements in hospital construction, maintenance and administration that have been established through the influence of the Association. There can be no doubt concerning the usefulness of this organization, not only to physicians who maintain hospitals but to all persons who have an interest in promoting better and more efficient hospital work. The Association will hold its next annual meeting in Detroit, September 24 to 27. Anyone interested in obtaining further information concerning the Association should address Dr. J. N. E. Brown, secretary, Toronto, Canada.

## THE NATIONAL LEAGUE FOR MEDICAL FREEDOM \*

AN ORGANIZATION ENGINEERED AND INSPIRED  
BY PATENT MEDICINE EXPLOITERS AND  
THOSE OPPOSED TO PURE  
FOOD LAWS

SOME OFFICERS OF THE NATIONAL LEAGUE FOR  
MEDICAL FREEDOM

So many inquiries have been received for information regarding the leaders in the National League for Medical Freedom that it has seemed worth while to collect such matter and to reproduce it herewith, as it may help explain one of the many reasons for the opposition shown by this organization to the American Medical Association and its activities:

B. O. FLOWER, Boston: President and one of the founders of the National League for Medical Freedom. Flower is ex-president of the R. C. Flower Medicine Co., a mail-order medical fake, founded by the notorious quack and swindler, R. C. Flower. R. C. Flower is a "graduate" of the notorious American Health College recently exposed in *The Journal* in connection with Carson, the Kansas City quack. While B. O. Flower was owner and proprietor of the *Arena*, that magazine carried advertisements of such frauds as the J. L. Stephens morphine cure (exposed in "The Great American Fraud"), the New York Institute of Physicians and Surgeons (put out of business by the government and exposed in "Nostrums and Quackery"), Welch's Magic Tea, Trilene Tablets, Clark's Rheumatism Cure, etc. His later magazine, the *Twentieth Century*, advertised that preposterous fraud, the "Oxydonor," exposed in *The Journal* and in "Nostrums and Quackery."

C. W. MILLER, Waverly, Ia.: Second vice-president of the National League for Medical Freedom. Miller publishes a newspaper that carries advertisements of such nostrums as Winslow's Soothing Syrup, Doan's

Kidney Pills, Lydia Pinkham's Vegetable Compound, Pierce's Favorite Prescription—all of which have been exposed by the American Medical Association. While in the Iowa legislature, Miller is said to have voted *against* (1) a pure food bill, (2) a bill that made the law relating to the sale of poison more rigid, (3) an act to regulate the sale of "patent medicines," (4) a bill to prevent the depositing of samples of "patent medicines" in private or public places—a bill that was formulated largely because of the deaths of children who had taken the sample packages left in yards and on porches. Miller is also alleged to have opposed bills that required the use of pure ingredients in ice-cream.

CHARLES WENTWORTH LITTLEFIELD, M.D., Seattle, Wash.: Chairman of the Washington branch of the National League for Medical Freedom. Littlefield exploits the "Twelve Vitalized Tissue Builders," which are to be used "in curing all mental and nervous diseases." He advertises that "any organ or tissue of the body can be reconstructed and its functions reestablished by the use of Twelve Vitalized Tissue Builders. So also can any disease be cured by their use." He advertises to give mail-order "treatments."

FREDERICK WALLACE ABBOTT, M.D. (F.S.Sc., Lond.), Haunton, Mass.: Member of the Advisory Board of the National League for Medical Freedom. The letters, "F.S.Sc., London," after a person's name indicate that the individual is a "fellow" of the "Society of Science, Letters and Art" of London. This so-called society is a serio-comic fake which issues "fellowships," with an elaborate "diploma of merit" thrown in, at \$5 apiece. The "diplomas" seem to be much sought after by "patent medicine" fakers. (See *The Journal*, May 29, 1909, and the book "Nostrums and Quackery," published by the American Medical Association, for further details concerning this fake "society.")

C. S. CARR, M.D., Columbus, O.: Member of the Advisory Board of the National League for Medical Freedom. Carr has been in the employ of the Peruna concern for years. He is editor of a pseudo-medical sheet in which some of the worst medical frauds in the country have been advertised. Many of these frauds have been exposed in *The Journal*. Carr does a mail-order medical business of his own, selling what he calls "tissue remedies." (See "The Great American Fraud," published by the American Medical Association, for further data on Peruna; also see *The Journal*, Dec. 9, 1911.)

GEORGE P. ENGLEHARD, Chicago: Member of the Advisory Board of the National League for Medical Freedom. Englehard publishes two journals which have long defended the "patent-medicine" interests and which have carried advertisements of some of the worst frauds in the nostrum business. Both of these publications have been exposed in "The Great American Fraud" and in *The Journal*.

CHARLES HUHN, Minneapolis: Member of the Advisory Board of the National League for Medical Freedom. Huhn was president of a cooperative "patent-medicine" concern, known as the American Druggists Syndicate, whose methods have been repeatedly exposed in *The Journal*.

A. F. STEPHENS, M.D., St. Louis: Member of the Advisory Board of the National League for Medical Freedom. Stephens was second vice-president of the Converse Chemical Company, a St. Louis nostrum concern which, a few years ago, tried to get advertising space in exchange for its treasury stock and offered to give away one share of stock with every bottle of its nostrum. This concern was exposed in *The Journal*, Jan. 12, 1907, p. 144.

\* From the American Medical Association Bulletin, Nov. 15, 1911.



## CORRESPONDENCE

### GREETINGS TO THE PROFESSION FROM THE PRESIDENT

The time is fast approaching for our annual meeting, at Sedalia, and it is to be hoped and confidently expected that there will be a full attendance.

We owe it to our profession, but even more to ourselves, to give the encouragement and support of our personal enlistment and presence at our annual meetings, unless prevented by some cogent and impelling duty that has higher claim on our time and service. Our presence not only bespeaks a spirit of loyalty in the purposes and ends of our state organization, but an appreciation of the efforts made by leading exponents of our profession in interpreting and bringing to our attention searching and exhaustive résumés in the study of disease, with the latest and most approved methods of treatment.

We get direct, lucid, practical expositions, by trained minds, of fundamental principles, together with comprehensibly elaborated and illustrated digests of the best teaching and technique in the evolution and progress of medical science, so addressed to our understanding as to enable us profitably to appropriate the efficient labors of others, who, if they have not larger capabilities, have at least better opportunities and facilities for study and research.

A proper and attentive audience at these meetings is always richly rewarded by the revelation and instruction of much apposite knowledge which might otherwise be slow and uncertain in sifting into the mental convolutions of our understanding. Digestion of the pabulum of material and scientific truths as presented in the program of these stated occasions serves to create not only increased mental tone, but an enlarged capacity for ingesting and assimilating fuller fruits of knowledge.

Some physicians, failing to appreciate the incalculable benefits to be derived from association and intercourse with the best representatives of our profession at these meetings, stay away, seeking their incentive and inspiration in local personal work; but however commensurate the personal equation may seem to work out individual destiny and meet its measure of professional responsibility, I am quite sure the physician who neglects the means of growth furnished in medical society organization contracts the perimeter of his professional circle, abridges his usefulness and does himself an irreparable wrong.

Take the three days' study of the scientific program of the State Medical Association for the

past several years, especially since the renaissance of modern medicine has given such impetus to our interest and study of disease as relates to etiology, pathology and prophylaxis; and I feel there are no other three days in the annals of our professional life that give us so large a measure of revealed and assayed knowledge, or richer opportunity for self improvement.

Now, if there be some who discredit this view let them be just enough to predicate their faith on evidence growing out of a personal experience, rather than in the spirit of a selfish prejudice.

We have a large and increasing number of accredited medical men, easily our best representatives, whose appreciation of the good they receive at these meetings inspires them to regular attendance; they esteem and enjoy it a privilege to be present—so much so they will not stay away, unless something out of the ordinary prevents. They look forward to these occasions with pleasurable anticipations. And why not? They know they are going to add to their mental storehouse, meet and enjoy old friends, kindred spirits, and engender new ones.

And more, they make the interim a period for refreshing themselves, either in the preparation of a paper, a course of study on some important matter to talk over with their friends, or covering some part, at least, of the program subjects that they may more clearly understand and discuss the same when presented.

All hail, ye Old Veterans! God speed you, and preserve you, for you are an honor to your profession. I want a hand clasp with all of you at Sedalia; for I feel indeed that true knighthood's chivalry is in flower in the person of the loyal, faithful friend and physician.

Doctor, if it has so happened, heretofore, that you have denied yourself the stimulus of professional contact with your brethren at these annual Chautauquas, as well as the Society the honor of your presence and encouragement, bethink yourself how much you lose, and lay aside the weight that so easily besets you, and come out to the Sedalia meeting. If you will do this I am satisfied you will return home a wiser, better man, with the perspective of a new and enlarged medical horizon gladdening your life, and the arousalment of new and latent faculties of professional interest and activity. The meetings of the State Medical Association should attract you and would do so if you will put yourself within the sweep of their influence.

Are you a member of your county medical society, and giving it proper support and encouragement? Of course you are or should be.

But, in fact, there are some good fellows, reputable and efficient physicians, within my own ken, who are delinquents in this debt, allowing the

interest of neglect to accrue on their professional obligation for some reason which, I am sure, they cannot justify even to themselves. It is, I am satisfied, just a remissness of duty rather than an intentional attitude toward society affiliation. They cannot, however, I feel, afford to lose the benefits of such representative affiliation; nor deny themselves the pleasurable pride of participation in the activities and interests incident to the work and progress of state and national organization, as expressed in the grand militant crusade movement for the establishment of higher ethical standards in our ministry, and the conservation of human life. Every physician who loves his profession, who has a pride in its glorious progress and beneficent achievements, and reveres its highest ethical expression, should attest his faith and loyalty by personal affiliation with its organized aims and ends.

The state medical association is a composite body, and can only exist with the aid and support of its component auxiliaries—the county medical societies in perfect correlation. Identify yourself with the great forward medical movement of to-day by joining your county society; or, if you are a member, by attending its meetings, making them interesting and instructive as far as your help can contribute. Always keep a little enthusiasm on tap—it is an antitoxin of great virtue, especially to be recommended both as a prophylactic and a cure for that type of professional listlessness or inertia so prevalent and characteristic of a contingent part of county society membership.

Recognize in your local society an opportunity both for imparting and receiving instruction; do whatever duty is assigned you, with cheerful willingness, to the best of your ability. Don't be afraid to write a paper or discuss one, neither to express yourself on reported interesting cases or to make clinical examination of one before members of your society. Don't be backward to advance an opinion, if you have one, for fear of the limitations of your professional knowledge. If you are wrong there is no better way to correct your understanding; and besides, the world is full of ignorance. It is something so common to all of us it makes most of us charitable to a brother's blunder, especially if he is trying to overcome. Again, ignorance is a peculiar element in our constitution, and seemingly must express itself at times in our acts and speech before we can make it conscious enough to take instruction—at least it is so in my case and I suppose it is true with others. But the sooner we can discover and realize it the earlier we can impart light and instruction.

With sincerest best wishes, I remain

Fraternally yours, ROBT. H. GOODIER.

Stoutsville, Mo., Feb. 3, 1912.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending towards honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.

### RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

**PROPAESIN** is propyl aminobenzoate  $C_6H_7.NH.CO.O$  ( $C_6H_7$ ) 1:4. It is a fine colorless, odorless nearly tasteless powder, which produces numbness when placed on the tongue. It is almost insoluble in water but soluble in alcohol, chloroform and ether. Said to be stronger than ethyl aminobenzoate (anesthesin). Used in the treatment of gastralgia, gastric ulcer and other painful diseases of the mouth, esophagus and stomach. It is said to be useful to reduce the sensibility of the mucous membranes of the nose, ear and larynx and to produce local anesthetics. Parmele Pharmaceutical Co., New York. (*Jour. A. M. A.*, Jan. 6, 1912, p. 33).

**LACTAMPOULE** is a pure culture of *Bacillus bulgaricus*, 12 Cc. in each ampule. Designed to afford a pure culture of the Bulgarian bacilli for the inoculation of milk or other culture medium, or for direct application in the treatment of affections of the body cavities. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Jan. 6, 1912, p. 34).

**BACILLARY MILK** is a sterilized fat-free milk fermented by the action of a pure culture of *Bacillus bulgaricus*. It contains over 2 per cent. of lactic acid. It is used as a means for the ingestion of the Bulgarian bacilli and for its lactic acid as well as for its nutritive value. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Jan. 6, 1912, p. 34).

**DEXTRI-MALTOSE**, Mead's contains approximately: maltose 52.0 per cent., dextrin 41.7 per cent., sodium chlorid 2.0 per cent. and moisture 4.3 per cent. It is a pale yellowish-white, granular, odorless powder, sweetish and soluble in water. Maltose being claimed to be more readily assimilable than other forms of sugar, Mead's Dextri-Maltose is proposed to supplement the carbohydrate deficiency of cow's milk. Used in milk mixtures in place of milk sugar. Mead, Johnson & Co., Jersey City, N. J. (*Jour. A. M. A.*, Jan. 6, 1912, p. 34).

**LACTIC BACILLARY TABLETS**—Fairchild are made from a practically pure culture of the *Bacillus bulgaricus*. They are designed for internal administration in the treatment of intestinal fermentative diseases by the Bulgarian bacilli, with the design of accomplishing the acclimation of the bacilli in the alimentary tract, so as to secure their characteristic action against putrefactive fermentation by the production of lactic acid. One or two tablets before or after meals. The diet should not contain an excess of proteid, but should afford sufficient sugar. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Jan. 20, 1912, p. 191).

**SALVARSAN** (Arsenphenol-amin hydrochlorid, arsenobenzol, "606") is 3-diamino-4-dihydroxy-1-arseno-benzene hydrochlorid,  $HCl.NH_2.OH.C_6H_4.As:As.C_6H_5.OH.NH_2.HCl+2H_2O$ , corresponding to 31.57 per cent.



arsenic (As). It is marketed in hermetically sealed tubes each containing 0.6 Gm. (10 grains) salvarsan. Salvarsan is a yellow, crystalline, hygroscopic powder, very unstable in air. It is readily soluble in water, yielding a solution with an acid reaction. The addition of sodium hydroxide solution to an aqueous solution of salvarsan precipitates the free base ( $\text{NH}_2\text{OH}\cdot\text{C}_6\text{H}_4\text{As}\cdot\text{As}_2\text{C}_6\text{H}_4\text{OH}\cdot\text{NH}_2$ ) which redissolves when more alkali is added.

It is given to adults in doses of 0.3 to 0.6 Gm. (5 to 10 grains); for children the dose is from 0.2 to 0.3 Gm. (3 to 5 grains). In infants doses of from 0.02 to 0.1 Gm. ( $\frac{1}{3}$  to  $1\frac{1}{2}$  grains) may be used. For a subcutaneous and intramuscular injection a suspension in a neutral fluid is commonly employed. This suspension is prepared as follows: The weighed amount of salvarsan is triturated with 0.35 Cc. normal sodium hydroxide solution to each 0.1 Gm. salvarsan. To this liquid a solution of 0.1 Cc. of normal sodium hydroxide solution for each 0.1 Gm. of salvarsan in 8 Cc. of sterile water is added drop by drop until the liquid is exactly neutral to litmus paper. If the neutral point is passed the excess of alkali must be carefully neutralized by a weak solution of hydrochloric or acetic acid. Subcutaneously, salvarsan may also be administered in form of oily suspensions.

These suspensions should be injected at once, using a syringe with a very thick platinum needle.

For intravenous injection a clear alkaline solution is prepared as follows: The weighed quantity of salvarsan is triturated with 0.7 Cc. normal sodium hydroxide solution for each 0.1 Gm. of salvarsan and then more of the alkaline solution is cautiously added until complete solution occurs.

This solution is diluted with from 100 to 250 Cc. (5 to 8 ounces) of sterile physiologic salt solution (0.9 per cent.) and filtered through a sterile filter.

The contents of a tube should be used at once after opening and under no circumstances should the contents of a tube damaged in transportation or any remnants of the powder from previously opened tubes be used. Victor Koechl & Co. (*Jour. A. M. A.*, Jan. 20, 1912, p. 191).

### REFORM IN MEDICINES

**PRESCRIPTION NONSENSE.**—Many competent physicians write poor prescriptions. These often are widely quoted and adopted though most unscientific, worthless or foolish. We are warned that it is the educated physician who is driving the laity to seek drugless treatments to their frequently serious detriment and often hopeless neglect, because he will not endeavor to find a simple drug, administered in a pleasant manner that will help the patient's troublesome symptom without injuring some other part of him. Also, as the layman hates more and more to be "drugged," as he terms it, and dislikes multiple mixtures, and dislikes to pay for a large bottle of some proprietary mixture, he often neglects to seek scientific advice (*Jour. A. M. A.*, Jan. 6, 1912, p. 34).

**THE CONSPIRACY OF SILENCE.**—Many lay publications have contracted to publish nothing detrimental to their advertising patrons. While so-called "independent" medical journals do not sign such contracts their failure to acquaint their readers with medical frauds amounts to the same thing. While certain important facts regarding Pepto-Mangen, Anasarcin, Tyree's Antiseptic Powder, Campho-Phenique, Phenalgin, Papine and Antikamnia have been published, "independent" medical journals have, in general, given no publicity to such reports. It is suggested that the "conspiracy of silence" will be maintained so long as an easy-going medical profession will support journals run in the interest of their advertisers (*Jour. A. M. A.*, Jan. 6, 1912, p. 36).

**"SURGERY, GYNECOLOGY AND OBSTETRICS" TO BE CLEAN FROM COVER TO COVER.**—Recognizing the impossibility of any one man being able to determine whether

or not certain proprietaries are worthy or unworthy additions to therapeutics the managing editor of *Surgery, Gynecology and Obstetrics*, Franklin H. Martin, announces that after Jan. 1 this high-class journal will carry advertisements only for those proprietary medicines which have been approved by the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, Jan. 6, 1912, p. 51).

### CONVICTIONS UNDER THE FOOD AND DRUGS ACT

**SWEET'S HONEY VERMIFUGE.**—This nostrum was found to contain santonin and semma as its essential constituents. It was declared misbranded because no honey could be found in it and also because the false claim of harmlessness had been made.

**DR. TOWNS' EPILEPSY CURE.**—This "epilepsy cure" from Fond du Lac, Wis., was declared misbranded because of the ridiculously false claim that it would "cure" epilepsy. Dr. Towns pleaded guilty before the Supreme Court had decided that lies such as he printed were not contrary to the spirit of the Food and Drugs Act.

**DIXIE FEVER AND PAIN POWDER.**—Headache powders sold by Morris-Morton Drug Co., Fort Smith, Ark. Because of promiscuous, absurd and dangerous claims made for this nostrum it was declared misbranded.

**STELLO'S ASTHMA CURE.**—Claimed to be purely vegetable was found to contain: potassium iodid, glycerin, cannabis indica and alcohol. It was declared misbranded because the quantities and proportions of cannabis indica and of alcohol were not stated on the label. (*Jour. A. M. A.*, Jan. 6, 1912, p. 51).

**SOCIETY OF UNIVERSAL SCIENCE.**—This was a pseudo-medical cult giving mail-order courses in the "Laws of Human Electricity." It sold mail-order courses that purported to teach the "Laws of Human Electricity and Their Application to Health, Mind Power and Spiritual Growth." The president of this so-called society was one Andrew McConnell.

Among the responsible men who were duped into endorsing this fake was the Rev. Dr. Robert S. MacArthur, who stands high in the religious world and who on July 7, 1908, at Carnegie Hall, in New York City, is reported to have introduced Andrew McConnell in most glowing terms as the founder of a new method of healing. Probably because of Rev. MacArthur's support many well-known citizens of New York City were present in the audience.

Recently McConnell surrendered to the police. Under the alleged impulse of delusions that she was interfering with his great "work" he had shot at his wife twice. McConnell appears to be an irresponsible paranoiac; it may be asked to what extent Rev. Dr. Robert MacArthur and those other "intellectuals" who listened so gravely to McConnell's idiotic vaporings were fostering the megalomania which has resulted in a homicidal frenzy of well-nigh fatal consequence (*Jour. A. M. A.*, Jan. 13, 1912, p. 129).

**"THYROIDECTOMIZED MILK."**—Many attempts have been made in recent years to alleviate the symptoms of hyperthyroidism by the administration of the milk, serum or dried blood of animals deprived of the thyroid gland. The theory underlying these attempts was that, after removal from an animal of the thyroid, toxic substances accumulate in the blood, or antibodies are formed, some of which pass into the milk, and which in some way neutralize the excess of thyroid secretion which is believed to be present in the blood in hyperthyroidism. The reports from the use of such preparations have not been very uniform. Perhaps the most favorable results reported followed the use of comparatively large amounts (a pint to two quarts daily) of the fresh milk of thyroidless goats.

Dr. Reid Hunt has suggested, that it was the milk *per se* rather than the presence in it of antibodies which was responsible for the improvement noted.

Recent work suggests that Hunt's explanation may be correct. Further clinical observations on this subject are much to be desired (*Jour. A. M. A.*, Jan. 20, 1912, p. 197).

**APPLYING THE PENALTY.**—A law that provides no penalties for its violation is worthless; in fact, it is worse than worthless, for not only is the law itself inefficacious, but the impunity with which it may be violated creates disrespect for all law. The various pure food laws of the country have accomplished good because drug adulterators and food sophisticators have found it either inconvenient or expensive to violate them. On the other hand the efforts of the Council on Pharmacy and Chemistry to protect the medical profession against frauds and misrepresentation in proprietary medicines are rendered largely abortive because the Council is purely an advisory body and its findings do not result in the penalizing of the concern found guilty of fraud or misrepresentation. The work of the Council would become more effective if physicians would confine their proprietary prescribing to such preparations as had been admitted to New and Nonofficial Remedies and if they would demand that publishers of medical journals, to which they subscribe, purge their advertising pages of products shown by the Council to be worthless, fraudulent, or both. The work of the Council would be effective only if it receives the full support of the medical profession (*Jour. A. M. A.*, Jan. 20, 1912, p. 198).

**MEDICAL JOURNALS AND NOSTRUM EXPLOITATION.**—The 250 or 300 independent medical journals published in the United States may be broadly divided into two classes: first, those whose subscription price is sufficient to warrant physicians to expect them to be run in the interest of the profession, and second, those whose subscription price is merely nominal and whose real support comes from the advertisers rather than from the subscribers. The term "independent" as applied to medical journals of the latter class, is misleading. Such journals, it is true, are independent of the medical profession, but they are subserviently dependent on the manufacturers of proprietary remedies whose advertising appropriations support them. While the journals of the first class could give the profession a square deal those of the second class cannot, for they are dependent on their advertising patrons (*Jour. A. M. A.*, Jan. 20, 1912, p. 198).

**EXPOSURES OF "PATENT MEDICINES."**—The interest and cooperation which the educational campaign of the American Medical Association is receiving is shown by the following taken from the *Albuquerque Morning Herald*: "The public-spirited gentlemen who are now posting standard works endorsed by the American Medical Association in various public places in Albuquerque, to enlighten the credulous public on the nature of the various 'cures' and nostrums now in vogue, deserve the gratitude of the people. This is an educational crusade almost as important as the other one started here to teach the boys and girls about the prevention of tuberculosis. 'The Great American Fraud' as Mr. Adams has so aptly termed it, will soon be able to see its finish and thousands of dollars now being donated by the gullible ailing to cold-blooded sharps who play on their apprehensions will be spent to better purpose. War on the fake dopes is war in the interest of the stomachs, health and lives of our people and such a crusade deserves the support of every one. At least it is worth the public's while to read these little books now being distributed about the city" (*Jour. A. M. A.*, Jan. 20, 1912, p. 200).

**A MARVELOUS MIXTURE.**—Take acetanilid 57 parts, of sodium bicarbonate 29 parts, of ammonium carbonate 10 parts and mix. You will then have an "ammoniated coal-tar product" which is such a "judicious combination of ingredients" that it may be counted on "to secure maximum anodyne and analgesic effect." This is "Phenalgin" and, while containing more than

50 per cent. acetanilid, yet its exploiters claim that it has "no depressing effect," "is never followed by depression" and "Its prolonged administration does not give rise to destructive blood metamorphosis." These and similar false statements are made in this year of miracles, 1912, and a large proportion of a presumably scientific profession "fall for it" and a multitude of medical editors stand sponsor for it! (*Jour. A. M. A.*, Jan. 27, 1912, p. 280).

## SOCIETY PROCEEDINGS

### ADAIR COUNTY MEDICAL SOCIETY

MEETING OF NOV. 2, 1911.

The regular meeting of Adair County Medical Society was held at Kirksville, November 2, in the office of Dr. E. S. Quinn.

Dr. Quinn announced that there would be no scientific program as this was the time for the annual election of officers. The society proceeded with this business and the following were elected: President, J. W. Martin; vice-president, A. W. Parrish; secretary-treasurer, J. Schooling Gashwiler; censor, C. S. Wilson; delegate, E. C. Callison.

MEETING OF DEC. 7, 1911.

The society met in the office of Dr. James Hanks, at Brashear.

Dr. Gashwiler presented a young lady, 18 years of age, with phthisis pulmonalis. In January, 1910, he had begun treatment of open-air life, rest and forced feeding; at that time she had all the symptoms of tuberculosis of four years' standing and weighed 100 pounds. In December, 1910, he presented the patient to the society. At this time her temperature was normal and she weighed 165 pounds. The society pronounced the case an arrested tuberculosis. Since March, 1911, she has been receiving tuberculin injections of the emulsion. She now weighs 135 pounds, the standard for her height. She coughs occasionally, yet feels well. This is a case treated at home. The opinion of the members was that the patient was making favorable and satisfactory progress.

Dr. James Hanks read a paper on "The Therapeutics of Typhoid." Dr. Hanks believes in water externally, internally and eternally in this condition and the only antipyretic needed. He advises the use of sulphocarbolates as intestinal antiseptics, and gives calomel as indicated. He predicted that the time will soon come when typhoid vaccine will be used universally.

The paper was freely discussed, Drs. Callison and B. B. Parris giving views on the typhoid vaccine question.

MEETING OF JAN. 4, 1912.

The meeting was held at Kirksville with Dr. J. W. Martin presiding.

The application of Dr. M. E. Derfler was reported favorably by the censors and he was duly elected to membership.

Dr. A. W. Parrish read a good paper on "Landry's Paralysis." Dr. E. C. Callison discussed the subject at length, dwelling with particular emphasis on the differential diagnosis of this condition from multiple neuritis.

J. SCHOOLING GASHWILER, M.D., Secretary.

### BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met in Warsaw, Thursday, December 21.

The following members were present: Drs. Jones, Rhodes, Stratton and Gist of Lincoln; Dr. H. E. Dunlop, of Cole Camp; Dr. Marion Dillon, of Fairfield and Drs. Haynes, Savage, Pomeroy, Sands and Smith, of Warsaw.



A very entertaining and instructive paper on "Obstetrics as Met by the Country Doctor," was read by Dr. Robert L. Pomeroy. It received a lively discussion.

Dr. J. R. Smith read a paper on "Pneumonia," which formed a nucleus for an interesting discussion by each member. At this season of the year we are confronted with this disease perhaps more frequently than any other disease, especially in children, and one of the diseases that few physicians do not fear, on account of the fatal results. In the careful observation and disquisitions which followed, we find the sum total of treatment resolves itself into good nursing, cleanliness (externally and internally) and plenty of fresh air, with pure water in abundance for drinking and to control fever. Each symptom should be watched and treated as the need requires.

The election of officers for the ensuing year resulted as follows: President, Dr. Marion Dillon, Fairfield; secretary-treasurer, Dr. John R. Smica, Warsaw; delegate, Dr. H. G. Savage, Warsaw; alternate, Dr. E. H. Gist, Lincoln.

The next regular meeting will be held in Warsaw, Tuesday, Jan. 9, 1912.

J. R. SMITH, M.D., Secretary.

#### CALDWELL COUNTY MEDICAL SOCIETY

This society has been meeting once a month since October, 1911, and doing postgraduate work which has proven very beneficial.

On Dec. 20, 1911, the society met in Breckenridge in the office of the secretary, and took up the subject of phthisis for study. Dr. S. D. Smith read a well prepared paper on "The Etiology and Diagnosis of Incipient Pulmonary Tuberculosis." The subject proved so interesting that it was decided to continue the study at the next meeting, to be held in Hamilton, January 18.

During the year 1911 there have been ten papers read by members of the society and four papers by non-members on invitation; several interesting cases were reported by members.

We have twenty-four members in good standing. We had but one delinquent and he renewed his membership and took a transfer to Colorado. We have two non-resident members: Dr. James A. Waterman, formerly of Breckenridge and now superintendent of the State Hospital at Farmington, and Dr. C. C. Leeper, formerly of Braymer, a member of the Board of Managers of the Industrial School for Girls at Chillicothe, who recently located at Excelsior Springs. Since moving to his new location Dr. Leeper's daughter and only child has died, in which bereavement the Caldwell County Medical Society deeply sympathizes with Dr. Leeper.

Dr. Samuel G. Meredith of Cowgill, is confined to his home by an attack of interstitial nephritis.

GEO. W. GOINS, M.D., Secretary.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society held its regular monthly meeting, January 8, at Cape Girardeau, in the Commercial Club rooms; with the following members present: Drs. Cunningham, Hlope, Howard, Nettles, Schulz, Wilson and Yount.

The board of censors passed upon the applications of Drs. R. D. Blaylock, J. St. Avit, Jr., D. G. Seibert and P. R. Williams, and recommended their being accepted for membership. Upon voting all were elected unanimously.

Program for the evening:

"Present Status of Salvarsan With the Report of a Case of Intravenous Administration." by Dr. Cunningham. The paper covered the technic and also gave points to bear in mind when the needle penetrates the

vein. It also showed that salvarsan has been used in other conditions where arsenic is indicated.

"Report of a Case of Double Tubal Pregnancy," by Dr. Hlope. This paper was very interesting and showed the rarity of double ectopic gestation. The doctor covered the details in connection with the ease.

On motion the society adjourned.

E. H. G. WILSON, M.D., Secretary.

#### HOLT COUNTY MEDICAL SOCIETY

The regular meeting of the Holt County Medical Society convened in the Commercial Club rooms at Mound City, January 4, the president, Dr. E. M. Miller in the chair. Owing to the extremely cold weather and other unfavorable circumstances, the attendance was not large but the enthusiasm of those present was marked. This was the annual meeting and election of officers for 1912 resulted in the following selections:

President, W. C. Proud; vice-president, R. R. Miller; secretary, W. S. Wood; treasurer, C. L. Evans; delegate, E. M. Miller; alternate, B. T. Quigley.

Dr. Lafe Minton of Fortescue was elected to membership. Dr. C. H. Thomas, a regular physician not in active practice and a resident of Mound City, was elected an honorary member.

The scientific program consisted of a symposium on "Nephritis" with the following contributions: "Diagnosis of Acute Nephritis," by Dr. Perry; "Diagnosis of Chronic Nephritis," by Dr. W. S. Wood; "Treatment," by Dr. J. M. Davis.

There were eleven members present. The next meeting will be held at Craig, April 4.

W. S. WOOD, M.D., Secretary.

#### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met with the secretary, Fayette, at 2:22 p. m., Friday, Jan. 5, 1912.

Present: Drs. Wright, Richards, Smith, Lee, Bonham and Watts.

Vice-President T. C. Richards presided.

The minutes of the December meeting were read and approved.

On account of zero weather, absences and professional engagements, there were no clinics or papers read.

The secretary reported all dues for the State and County Associations paid up with the exception of five members who will pay up soon.

Dr. W. E. Thompson, of Boonesboro, made application for membership; this was laid over until the February meeting.

Dr. W. R. Hawkins, of Glasgow, paid up his dues to the County and State.

Dr. Wright called attention to the sudden death from acute indigestion reported and asked for views of members as to causes and correct treatment. Discussion followed by all members present.

Suggestions as to fee bills, organization and advancing prices for prescriptions, visits, etc., were discussed. This was a very pleasant and harmonious session.

C. W. WATTS, M.D., Secretary.

#### MACON COUNTY MEDICAL SOCIETY

##### DECEMBER MEETING.

The December meeting of the Macon County Medical Society convened in the office of Dr. W. H. Miller, at Macon.

The applications of Dr. A. D. Grey, New Cambria, and Dr. Stephen T. Ragan, Ardmore, were received and referred.

The program consisted of a symposium on "Pneumonia," and the following contributed:

"Etiology, Including Bacteriology," by Dr. Pipkin.

"Morbid Anatomy, First, Second and Third Stages; Relative Frequency in Different Lobes and Lungs; Relative Frequency of Associated Lesions," by Dr. Brewington.

"Symptoms and Diagnosis: Symptoms and Physical Signs of Various Stages; The Relation of Fever, Cough, Skin, Pulse, Respiration, Blood-Pressure, to Course and Duration," by Dr. Cambre.

"Various Complications and Prognosis, Relation of Fever, Pain, Delirium, Blood-Pressure, Pulse Location, to Prognosis; The Causes of Death in Pneumonia; The Relation of Complications to Prognosis and The Relative Frequency of Various Complications," by Dr. Smith.

"Treatment; Remedial, Hygienic Aeropathy, The Crisis, The Complications," by Dr. W. H. Miller.

Attendance good. The papers and discussions were unusually interesting and instructive.

#### JANUARY MEETING.

Only a business meeting was held in January on account of the extreme cold and small attendance.

Drs. A. G. Grey and Stephen T. Ragan were elected to membership.

Officers for 1912 were elected as follows:

President, Geo. F. Brewington; vice-president, C. W. Reagan; secretary-treasurer, A. B. Miller; delegate, P. R. Tainter.

Dr. Reagan was requested to read a paper on "Anesthetics and Anesthesia," at the next meeting.

The Society expects to have three papers presented at the next meeting; one on "Tuberculosis," one on "Syphilis," and one on "Gonorrhea." These papers are to be published in the county newspapers in the name of the Medical Society and unsigned by author.

A. B. MILLER, M.D., Secretary.

#### RAY COUNTY MEDICAL SOCIETY

Ray County Medical Society met in called session at Richmond, on December 20, at the office of Dr. C. B. Shotwell. In the absence of the president and the secretary, Dr. Shotwell was elected to act as president and Dr. E. F. Higdon to act as secretary. Members present: T. B. Cook, J. B. Shotwell, J. F. Clark, J. L. Roberts, J. E. Ball, R. Sevier, E. F. Higdon.

The following officers were elected for the ensuing year: President, T. B. Cook, Rayville; first vice-president, J. F. Clark, Rayville; second vice-president, J. L. Roberts, Richmond; treasurer, L. D. Greene, Richmond; secretary, E. F. Higdon, Richmond; censor, J. E. Ball, Richmond; delegate, C. B. Shotwell, Rayville and alternate, J. F. Clark, Rayville.

The next meeting will be held at the office of Drs. Greene and Shotwell on the 3rd Wednesday in February, 1912. E. F. HIGDON, M.D., Secretary.

#### ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

MEETING OF DEC. 6, 1911.

The society was called to order in regular session by the president, Dr. S. F. Kessler.

A resolution endorsing the bill to establish a department of public health, introduced in Congress by Senator Owen, carried unanimously. Each member of the society is requested to write a personal letter to the senators from Missouri and the representatives from this district urging their support of the bill.

Dr. O. B. Campbell read an instructive paper on "The Open Treatment of Fractures," which was discussed

by Drs. Jacob Geiger, C. H. Wallace, T. E. Potter, Charles Geiger and H. S. Forgrave; discussion closed by Dr. Campbell.

Officers for 1912 were elected as follows: President, J. I. Byrne; first vice-president, J. J. Bansbach; second vice-president, W. Martin; secretary, W. F. Goetze; treasurer, J. M. Bell; censor, A. L. Gray; delegate, C. W. Fassett; alternate, C. R. Woodson.

The following were appointed a committee to arrange for the annual banquet; Drs. J. M. Bell, C. W. Fassett and P. I. Leonard.

Sixty members were present.

#### MEETING OF DEC. 20, 1911.

Dr. Howard C. Rice was elected to membership.

The banquet committee reported and recommended that the banquet be held on Jan. 3, 1912, in honor of Dr. Jacob Geiger as senior surgeon of this society. The report was adopted.

Dr. J. J. Bansbach read a paper entitled "The Results of the Use of Salvarsan."

Dr. S. F. Kessler, the retiring president, presented the gavel to the new president, Dr. J. I. Byrne, who assumed the chair.

Members present twenty-four.

HERBERT LEE, M.D., Secretary.

#### SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at the court house in Marshall, on January 9, President A. E. Gore in the chair.

There being no business the society proceeded at once to the subjects for discussion.

Dr. D. C. Gore of Marshall read a very excellent paper on "The Present Status of Serum Therapy." This paper showed arduous work in preparation and was a very scientific review of the subject. The discussion was largely indulged in, the consensus of opinion being that the efficacy of "Antityphoid Vaccination" was well established.

Dr. John R. Hall of Napton presented the subject of "Immunity."

There being nothing for further consideration the society adjourned to meet again on Tuesday, February 13, at 1 p. m. JOHN R. HALL, M.D., Secretary

#### SCHUYLER COUNTY MEDICAL SOCIETY

Schuyler County Medical Society met in regular session in the office of Dr. W. F. Justice at Lancaster, on January 8, with the president, Dr. A. J. Drake in the chair, and the following members present: Drs. B. B. Potter, W. A. Potter, W. F. Justice, E. L. Mitchell, J. H. Keller, A. J. Drake and J. B. Bridges.

The Committee on Credentials reported on the applications of Dr. C. F. Kratzer, C. E. Lowrey and J. C. Duckworth, and stated that Dr. Lowrey had withdrawn his application; that Dr. Kratzer had removed to another state; that Dr. Duckworth being a resident of Iowa was not eligible to membership. The report of the Committee was adopted.

Dr. J. B. Bridges read a paper on "Empyema" which brought out a very interesting discussion.

Officers for 1912 were elected as follows: President, W. F. Justice; vice-president, B. B. Potter; secretary-treasurer, J. B. Bridges; delegate, B. B. Potter; alternate, E. L. Mitchell.

A communication from the Committee on Public Health was read and discussed and a number of members expressed their willingness to assist in the good work.

The next meeting will be held at Glenwood, Monday, April 22. J. B. BRIDGES, M.D., Secretary.



### SHELBY COUNTY MEDICAL SOCIETY

MEETING OF AUG. 6, 1911.

Dr. Carson and Salyer exhibited the stomach of a man who died of carcinoma of that organ. Dr. Carson gave an excellent history of the case.

Dr. Chapman reported a post-mortem in which rupture of arch of aorta was found, also remains of an old abscess in appendiceal region that had opened externally.

Drs. White and Vaughn read good papers on dysentery which were generally discussed. Irrigation and local treatment were advocated. Dr. Salyer said that in children he had observed that if he could obtain the characteristic stool of bismuth subnitrate that recovery always took place; why, he was unable to state.

Present: Drs. Salyer, Maddox, Vaughn, Battersby, Smith, White, Roy, Carson, Chapman and Wood.

MEETING OF SEPT. 14, 1911.

Dr. Carson reported that patient had died whom he reported at previous meeting. Woman aged 62. Four months previous to last illness, malignant mammary and axillary glands were removed. She developed cerebral disease the origin of which was obscure. Dr. Carson and consultants believed it was metastatic carcinoma.

Dr. Battersby reported case of young man found in stupor and remained that way for twenty-four hours. All examinations for brain lesion were negative; no history of injury. He believed it a case of drugging; probably with chloral.

Dr. Chapman reported case of fever following labor ten days with pelvic cellulitis, preceded by follicular tonsillitis. After discharge of pus from cervix recovery took place. In two previous labors patient had fever with known cause.

Members present: Drs. Vaughn, Salyer, Battersby, Chapman, Smith, Furnish, Roy and Wood.

MEETING OF NOV. 9, 1911.

Dr. Carson read a good paper on carcinoma. He also reported some good results with pyoktanin on some ulcers of apparent malignancy.

Drs. Smith and Daniel discussed the efficiency of paste on selected cases of skin cancer.

It was voted to hold a banquet on New Years Eve and a committee was appointed to arrange for same.

A. M. Wood, Secretary.

### WAYNE COUNTY MEDICAL SOCIETY

The society met at Piedmont, January 5, with the following members present: Drs. R. J. Owens, J. W. Hale, Gilmer, George Toney, L. E. Toney, W. S. Bailey and T. Freeman.

The first business was the election of officers and the following were duly elected: President, George W. Toney; vice-president, J. P. Sebastian; secretary, T. Freeman; censors, L. E. Toney, Gilmer, Hale, Owens and Sebastian; delegate, J. W. Hale; alternate, R. J. Owens.

After the election of officers there was an interesting discussion of cases reported by the members.

The next meeting will be held at Greenville on the first Tuesday in February.

T. FREEMAN, M.D., Secretary.

## BOOK REVIEWS

**ELECTRICITY.** Its medical and surgical applications, including radiotherapy and phototherapy. By Charles S. Potts, M.D. Professor of Neurology, Medico-Chirurgical College, etc., etc. With a section on electrophysics by Horace C. Richards, Ph.D. Pro-

fessor of mathematical physics in the University of Penn., and a section on x-rays, by Henry K. Hancock, M.D. Professor of Röntgenology in the University of Penn., Medical Department, Philadelphia. With 356 illustrations, and 6 plates, pp. 509. Lea & Febiger, Phila. & Lond. 1911. Price, cloth, \$4.75 net.

An important book on electrical therapeutics, being a careful consideration of the many ways in which electricity can be made to serve in treatment and diagnosis, from both a medical and a surgical standpoint. The principal contributions of recent years have been consulted, and their presentations are gathered here.

The plan of the book is a departure from the usual custom and instead of considering the physiological actions, therapeutic uses, and methods of application of each form of current separately, these subjects are discussed collectively from a medical rather than from a physical standpoint. For example, instead of taking up the constant current and exhausting that subject before considering the static current, the forms have been grouped with regard to the effects produced; in discussing the effect of current on metabolism the action of all the forms on this process have been brought together in one section. The advantage of this arrangement in expediting the choice of the most beneficial form of current is at once apparent.

The work is a valuable addition to the subject of electrical therapeutics.

**PRACTICAL NURSING FOR MALE NURSES IN THE R.A.M.C. AND OTHER FORCES.** By Major E. M. Hassard, R.A.M.C., and A. R. Hassard. Cloth, pp. 334. Illustrated. New York, Oxford University Press. Price, 1.50.

This book is full of things a nurse should know. As a reference book for nurses and physicians it will be very useful.

**HYGIENE AND MORALITY.** A manual for nurses and others, giving an outline of the medical, social and legal aspects of the venereal diseases. By Lavinia L. Dock, R.N. Graduate of Bellevue Hospital Training School, etc. pp. 200. G. P. Putnam's Sons, New York.

Primarily a book for women dealing with venereal disease in its various aspects, emphasizing social significance of these diseases, and indicating, by suggestion contained in statistics, the crusade against them that devolves upon woman.

We cannot agree with all the doctor has to say but we do agree that the whole book is worth reading several times over.

**HANDBOOK OF THE SURGERY OF THE KIDNEYS.** By W. Bruce Clarke, M.A., M.B. (Oxon.), F.R.C.S. Senior Surgeon to St. Bartholomew's Hospital, etc., etc. With 5 plates and 50 illustrations in the text, pp. 199. Oxford University Press, New York. 1911.

A short account of clinical observations dealing with lesions of the kidney subject to surgical intervention. The book is practical and a desirable volume for the surgeon to keep on his desk. The value of the text is greatly enhanced by the liberal illustrations with which the book is supplied.

**THE PARASITIC AMOEBAE OF MAN.** By Chas. F. Craig, M.D., Capt. Medical Corps, U. S. A. From the Bacteriological Laboratory of the Army Medical School, Washington, D. C., etc. Illust. pp. 253. J. B. Lipincott & Co. Phila. & London. 1911. \$2.50.

The result of twelve years study of the subject of amebic infections of man. The volume, following the first chapter which contains a historical review of the investigations made in this field, is devoted to the study of the numerous species of amebae parasitic in man, special attention being given them from the standpoint of morphology, life-cycle, methods of differ-

entiation and disease-relations. The book fills a want inasmuch as there is little recent discussion of the subject appearing in English, either as translation or original.

**A MANUAL OF NURSING.** By Margaret Frances Donahoe, formerly superintendent of nurses, and principal of training school, Philadelphia General Hospital. Illustrated. pp. 489. D. Appleton & Co. New York & London. 1910.

A book that contains many things the nurse should know; things that are ordinarily learned only in the course of long experience. The book is the fruit of many years' service, and might well be placed in every hospital library.

**THE PREVENTION OF SEXUAL DISEASES.** By Victor G. Vecki, M.D., ex-president San Francisco German Medical Society, etc., etc. With introduction by Wm. J. Robinson, M.D. pp. 132. The Critic and Guide Co. New York. Price \$1.50.

The subject of venereal disease is discussed by this author in a direct and intelligent manner. The volume should be read by every layman. The facts are not to be misunderstood, and it would be a decidedly good thing were more books like this distributed among the libraries of the country.

**THE HUMAN ATMOSPHERE, OR THE AURA MADE VISIBLE BY AID OF CHEMICAL SCREENS.** By Walter J. Kilner, B.A., M.B. Cantab. M.R.C.P., etc. Illustrated. pp. 329. New York. Rebman Co. 1911.

It is impossible for us to take this book seriously. It smacks too much of Cagliostro and his kind. The human aura is too ancient a fable to exploit safely in this material age. The "claim" has been over-worked and we are unable to see anything in it.

**COMPENDIUM OF REGIONAL DIAGNOSIS IN AFFECTIONS OF THE BRAIN AND SPINAL CORD.** A concise introduction to the principles of clinical localization in diseases and injuries of the central nervous system. By Robert Bing, privat-docent for neurology in the University of Basle. Translated by F. S. Arnold, B.A., M.B., B.Ch. (Oxon). Revised by David I. Wolfstein. With seventy illustrations. pp. 215. New York. Rebman Co.

This work is intended by the author to be a companion book for the physician as an aid to him in localizing pathological processes which affect the central nervous system. It is based upon clinical observations, and is an attempt to simplify a subject only too frequently rendered complex.

**A MANUAL OF PRACTICAL HYGIENE FOR STUDENTS, PHYSICIANS, AND HEALTH OFFICERS.** By Chas. Harrington, M.D., late professor of hygiene in the Medical School of Harvard University. Fourth edition, revised and enlarged by M. W. Richardson, M.D. Secretary to the State Board of Health of Massachusetts. Illustrated with 12 plates in colors and monochrome, with 124 engravings. pp. 850. Lea & Febiger. Phila. & New York. 1911. \$4.50 net.

Each of the nineteen chapters in the book is a valuable contribution to the literature on hygiene. The volume is as serviceable for the layman as for the professional medical man, or the health officer. It is easily one of the foremost books on the subject. In this edition the statistics and text have been brought up to date. Though Dr. Harrington died before he had completed the revision of this edition the work was taken in hand by Dr. Richardson and carried to completion in a way that would have done credit to the author himself.

**THE MECHANISM OF LIFE.** By Dr. Stephane Ledue. Professeur a l'Ecole de Medecine de Nantes. Translated by W. Deane Butcher, formerly president of

the Röntgen Society, etc. Illust. pp. 172. New York, Rebman Co. 1911.

An interesting and instructive little book dealing with biology from a physico-chemical standpoint. It pays special attention to molecular forces as these are excited by solution, osmosis, diffusion, cohesion, and crystallization.

The chapter on Evolution and Spontaneous Generation is absorbing, and while our conclusions may not entirely agree with those of the author, the chapter is none the less interesting. The book claims the attention of the reader throughout.

**LIPPINCOTT'S NEW MEDICAL DICTIONARY.** A vocabulary of the terms used in Medicine, Dentistry, Veterinary Medicine and the allied sciences with their pronunciation, etymology and signification, including much collateral information of a descriptive and encyclopedic character. By Henry W. Cattell, A. M. (Laf.), M.D. (U. of P.), Editor of International Clinics, fellow of the College of Physicians of Philadelphia, etc. Second Edition \$5.00. J. B. Lippincott Co. Philadelphia and London.

The need of a reprint edition and a new second revised edition in less than a year at once show the value of this work. Over five thousand additions and changes have been made. About five hundred new words, gleaned from the recent literature have been added and over seventy new illustrations. The aim of the author has been to include the greatest number of words, with their definitions. To this end space has not been taken up by complete etymologies, and only the pronunciation of the more difficult and unusual terms is indicated, but words are all divided into syllables and accented. Derived words are placed under the head word and are not entered separately. The definition is abbreviated or implied where the head word makes the meaning self-evident. This is the first dictionary to contain veterinary and medical terms and medical biographies; the first to use capitals and small letters, thus making it a guide to capitalization; the first to indicate the B.N.A. terms, and the drugs that are official in the Pharmacopeia. These scientific terms give references to the more common names and vice versa, thus giving a valuable means of comparing the old and newer terms, to those unfamiliar with the more scientific names. Many definitions which are difficult to explain are supplemented by examples and illustrations. Frequent references to books and journals permits one to turn to a more exhaustive treatment of the subject if further information is desired. Much attention is paid to synonyms, and cross references indicate associated or connected words. Much collateral information of a descriptive and encyclopedic character is included. Especial care has been taken to secure exactness in the table of equivalents, of weights and measures, because of the discrepancies in this information in the majority of reference books. The volume is bound in flexible leather and thumb indexed. It should prove a valuable and popular desk reference work.

**A TEXT-BOOK OF SURGICAL ANATOMY.** By William Francis Campbell, M.D., Brooklyn, New York. Professor of Anatomy, Long Island College Hospital; Attending Surgeon to the Methodist Episcopal, Swedish and Bushwick Hospitals; Consulting Surgeon to the Jamaica Hospital. Second Edition, Revised. With 319 Original Illustrations. Philadelphia and London: W. B. Saunders Company. 1911.

The author has attempted to select and correlate only such facts which have a practical bearing and to emphasize those regions which have a peculiar interest to the surgeon. The subject matter is so arranged that the information is easily accessible. Surgical notes and practical applications enhance the clinical value of the work. Frequent illustrations, often of a semi-diagrammatic nature, bring out the anatomic points in a very admirable manner. For example, the diagrammatic



representations on the surface of the anatomy of shoulder dislocations, on pages 254-258 at once show the anatomical landmarks. The author does not claim to give any new facts but only wishes credit for the manner of presentation. A bibliography gives proper credit for the sources of the material.

**LONDON PRACTITIONERS' MANUALS.** Anesthesia and Analgesia. By J. D. Mortimer, M.B. (Lond.), F.R.C.S. (Eng.). Anesthetist, Royal Waterloo Hospital, etc., etc. pp. 276, 12mo. Price \$2.00. London: University of London Press, 1911. American Branch, 35 W. 32nd Street, New York.

Feeling that the subject has too often been approached from the standpoint of the specialist, the author in this little work has endeavored to fill the want thus created. The volume is intended to give the practitioner practical, workable, information that he will require in the operating room. The mechanics of the subject has been carefully considered, and a chapter on medico-legal questions closes the book.

**CASE HISTORIES IN NEUROLOGY.** A selection of histories setting forth the diagnosis, treatment, and post-mortem findings in nervous disease. By E. W. Taylor, A.M., M.D. Instructor in Neurology, Harvard Medical School, etc., etc. Svo. pp. 305. Boston. W. M. Leonard, Publisher. 1911.

The method of studying disease through case histories is growing greatly in favor. This volume undertakes to set forth the essential facts of the commoner forms of nervous affections by presenting 114 histories of cases. These cases have been wisely chosen and are considered from the four viewpoints of Symptomatology, Diagnosis, Treatment, and Pathological findings. Each chapter has both an introduction and a summary, and every case receives careful attention, special emphasis being given to differential diagnosis and treatment. Excellent judgment has been exercised in the selection of illustrations and the work is practical and efficient.

**THE FOURTH PHYSICIAN: A CHRISTMAS STORY.** By Montgomery Pickett. Illustrated by Gordon Stevenson. pp. 144. Chicago. A. C. McClurg & Co. 1911. Price \$1.00 net.

A charming, delicately woven tale of Christmas time that appeals strongly to one's sympathies and makes one think. Just the book for the doctor's reception-room table.

**DORLAND'S AMERICAN ILLUSTRATED MEDICAL DICTIONARY.** A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Medicine, Nursing, Biology and kindred branches; with new and elaborate tables. Sixth revised edition. Edited by W. A. Newman Dorland, M.D. Large octavo. pp. 986. Illust. 329, with 119 in colors. Containing over 7,000 more terms than the previous edition. London and Philadelphia. W. B. Saunders Co. Flexible Leather, \$4.50 net; thumb indexed, \$5.00 net. 1911.

The Dorland Dictionary enjoys a prestige which is the result of five editions each of which possessed features distinguishing it from other dictionaries. The sixth edition will not only maintain the standard established by the foregoing editions but will add new lustre to the name of Dorland.

This edition has been reset from A to Z so that it is in all points essentially a new work. Some of the features new to this edition are: the 7,000 new words; the system of capitalization in which initial caps are used for proper names only; the pronunciation of every word and the special attention given to etymology; and the generous space devoted to medical biography in which are given the important events in the lives of the eponymists and "fathers" of medicine. The ana-

tomical tables are extensive and the information referring to the various structures is classified with a view to expediting reference. A Dosage and Therapeutic Table especially designed for ready reference is arranged alphabetically and covers some fifty or more pages. Dorland gives every word a separate paragraph, and defines phrases under the nouns. The flexible leather cover makes the work an easy one to consult.

**THE CONCISE OXFORD DICTIONARY OF CURRENT ENGLISH.** Adapted by H. W. Fowler and F. G. Fowler, authors of "The King's English," from The Oxford Dictionary. pp. 1041. Svo. Cloth. New York. Oxford University Press. 1911.

This dictionary is an adaptation on a small scale of the Oxford English Dictionary now nearing completion, and is essentially British. The spelling follows the British preferences and many of the definitions are British provincialisms. Its copious use of illustrative sentences renders it of more value in some respects than any other dictionary of its size yet published.

The commoner every day words which are usually disposed of with a definitive word or two receive special attention where there is a diversity of usage or sense. Etymology also is emphasized in a larger way than is customary in dictionaries of this extent. Many words that have passed through several languages on their way Englishward have these evolutions recorded in full.

**TEXT-BOOK OF MEAT HYGIENE.** With special consideration of ante-mortem and post-mortem inspection of food-producing animals. By Richard Edelman, Ph.D. Professor at the Royal Veterinary High School in Dresden, etc., etc. Authorized translation revised for America by John R. Mohler, A.M., V.M.D. and Adolph Eichhorn, D.V.S. With 152 illustrations and 5 colored plates. Svo. pp. 392. Philadelphia and New York. Lea & Febiger, 1911.

The body of this work is a German production and possesses the characteristic thoroughness and breadth peculiar to those authors. The subject being of course intrinsically the same in all countries its adaptation to American conditions was simply a matter of providing for the differences in sanitary regulations that obtain here. The volume is intended to be a guide for the inspector of meats and contains practically all the information needed by those officials. This second American edition bespeaks its serviceableness, and has been brought strictly up to date. Both American editions contain the regulations of the Department of Agriculture.

**MANUAL OF PHYSIOLOGY FOR STUDENTS AND PRACTITIONERS.** By H. Willoughby Lyle, M.D., B.S. (Lond.), F.R.C.S. (Eng.). Assistant Ophthalmic Surgeon to King's College Hospital, etc., etc. With one plate and 35 figures in the text. pp. 747. New York. Oxford University Press. 1911. Price \$4.00.

Dr. Lyle has succeeded in producing a physiology that is convenient in size and at the same time comprehensive enough to meet all the requirements of a manual. Care has been taken to make it as concise as possible and those matters that have no direct bearing on the subject have been excluded. Histology and embryology, being anatomical rather than physiological, receive only passing reference. Where occasion presents, the bearing of physiology on practical medicine and surgery is pointed out. As a manual on the subject of physiology the work fills a real vacancy on the medical book shelf.

**PATHOLOGICAL TECHNIC.** Including directions for the performance of autopsies and for clinical diagnosis by laboratory methods. By F. B. Mallory, M.D. Associate Professor of Pathology, Harvard Medical School; and J. H. Wright, M.D., director of the

Pathological Laboratory, Massachusetts General Hospital, Fifth revised edition. Svo. pp. 507. Illust. Philadelphia & London. W. B. Saunders Co. Cloth, \$3.00. 1911.

This work will continue to occupy its well merited place in the library of the laboratory worker. It has been subjected to a thorough revision and this new edition appears with the addition of much new matter and the elimination of what has become obsolete. The important revisions pertain to the general methods of fixation and staining; blood examination; a greatly improved method for staining of blood-platelets, and the preparation and use of Wright's blood stain. There has been considerable information added in the field of bacteriological staining, together with directions for performing Wassermann and Noguchi serum tests for syphilis.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Tenth revised edition. Octavo. pp. 1328. Illust. Philadelphia and London. W. B. Saunders Co. Cloth \$5.50 net; Half Morocco, \$7.00 net. 1911.

The author claims for this edition a more thorough revision than for its predecessors. The volume has been brought up to date in the matters of etiology, diagnosis, and treatment, while little space has been given the more or less uncertain aspects of therapeutics. Tropical medicine, and serum therapy receive special attention, and emphasis is given to prophylactic measures and casual therapy.

THE TREATMENT OF FRACTURES. With notes upon a few common dislocations. By Chas. L. Scudder, M.D., Surgeon to the Massachusetts General Hospital. Seventh edition, revised and enlarged. Octavo. pp. 708, with 990 original illustrations. Philadelphia & London. W. B. Saunders Co. 1911. Polished Buckram, \$6.00 net; Half Morocco, \$7.50 net.

This new edition of the well known work by Dr. Scudder contains the important acceptances of the last three years on the treatment of bone injuries. The x-ray in fracture work has received special attention, and there is also a rather conservative chapter dealing with the operative treatment of fractures. The following subjects have received additions of new matter: fractures of the skull; old fractures of the nasal bones; fractures of the spine; fractures of the neck of the femur; old fractures of the lower end of the tibia; injuries to the lower tibial epiphysis; excision of the shoulder joint, and damage to the musculospiral nerve.

DORLAND'S AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, M.D., editor Dorland's American Illustrated Medical Dictionary. Seventh edition. 32mo pp. 610. Philadelphia and London, W. B. Saunders Co. Flexible Leather, gold edges, \$1.00 net; thumb indexed, \$1.25 net. 1911.

The author has certainly succeeded in his endeavor to develop the pocket lexicon to a degree of usefulness not heretofore attained. This little volume is a wonderful achievement and marks a new epoch in dictionary making. The arrangement is after the order of the sixth edition, and while the definitions are of course briefer than those in the large work, they are direct and lucid. The volume fills a want that has gone unfilled till now. Beside the lexicographical part of the dictionary there is much matter in tabular form that will be of great value to students and in reference work.

NURSING IN THE ACUTE INFECTIOUS FEVERS. By George P. Paul, M.D., Visiting Physician to the Samaritan Hospital, Troy, N. Y. Second Revised Edition, 12mo pp. 246. Illust. Philadelphia and London; W. B. Saunders Co. Cloth, \$1.00 net. 1911.

This edition has been carefully revised and contains new matter on acute anterior poliomyelitis, and paratyphoid fever. There will also be found important additions to the chapters on Reduction of Fever, Detection of Complications, Poisons and Their Antidotes, and others. This work is intended for the nurse and subjects that properly belong in the domain of the laboratory worker or the graduate in medicine have been excluded. The work is divided into three parts: the first treats of fever in its general aspects; the second discusses the acute infectious fevers as to cause, management, etc., and the third deals with practical procedures and general information pertinent to the avocation of nursing.

A MANUAL OF PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Ninth edition, revised. 12mo pp. 573. Illust. Philadelphia and London, W. B. Saunders Co. Flexible Leather, \$2.50 net. 1911.

Dr. Steven's book first appeared in 1892; since then it has run through nine editions. The text of this edition has been thoroughly revised, with eliminations and additions. Sections on dysentery, acute pancreatitis, worm infection, rheumatic fever, dengue, rheumatoid arthritis, purpuras, aphasia, myelitis, acute anterior poliomyelitis, and disseminated sclerosis, have been wholly rewritten. There have been many added articles which tend to render the work entirely up to date. The work is intended to serve as an outline of medical practice to be used by the student in connection with lecture and clinical work.

A REFERENCE MANUAL OF OBSTETRIC NURSING. By W. Reynolds Wilson, M.D., Visiting Physician to the Philadelphia Lying-In Charity; Member of the American Pediatric Society. Second revised edition. 32 mo pp. 256. Illust. Philadelphia and London. W. B. Saunders Co. Flexible Leather, \$1.25 net. 1911.

This serviceable little book now appears in its second edition. It contains a new chapter on precipitate labor, besides having been subjected to general revision of the text. Because of its intelligent arrangement this book has a marked value for the obstetric nurse.

VETERINARY BACTERIOLOGY. By Robert E. Buchanan, Ph.D., Professor of Bacteriology in the Iowa State College of Agriculture and Mechanic Arts, Division of Veterinary Medicine. Svo. pp. 516. Illustrations 214. Philadelphia and London, W. B. Saunders Co. Cloth, \$3.00. 1911.

This volume presents, in a revised form, the author's lectures on veterinary bacteriology given during the past six years in the Iowa State College. It should be enthusiastically received by those who are interested in the subject as it is a thoroughly competent work, remarkably free from digression, and containing the latest in veterinary bacteriology. The general divisions of the book are: morphology, physiology and classification of bacteria; laboratory methods and technique; bacteria and the resistance of the animal body to disease; pathogenic microorganisms exclusive of the protozoa; pathogenic protozoa, and infectious diseases in which the specific cause is not certainly known.

SCIENTIFIC FEATURES OF MODERN MEDICINE. By Frederic S. Lee, Ph.D., Dalton Professor of Physiology, Columbia University. 12mo. Cloth. pp. 183. New York. The Columbia University Press. 1911. \$1.50 net.

In this series of eight lectures delivered at the American Museum of Natural History in New York City, under the auspices of the lectureship founded by the late Morris K. Jessop, the author had given a most instructive and entertaining review of the progress of scientific medicine during the last half century. The lectures are in the popular style and constitute a



volume that covers the subject both comprehensively and concisely, with the display of charming diction. The layman who wishes to acquaint himself with the recent renaissance of medicine cannot do better than obtain this work.

**COLLECTED PAPERS.** By the Staff of St. Mary's Hospital Mayo Clinic, Rochester, Minnesota. 1910. 8vo. pp. 633. Philadelphia and London. W. B. Saunders Co. 1911.

The first volume which came out about a year ago was full of good things, and the table of contents of this volume promises a volume of equally satisfactory papers. These papers will be issued from time to time.

**LONDON PRACTITIONERS' MANUALS.** Minor Surgery. By Leonard A. Bidwell, F.R.C.S. Surgeon to the West London Hospital, etc., etc. pp. 265 12mo with 88 illustrations. Price \$2.00. London: University of London Press. 1911. American Branch, 35 W. 32d Street, New York.

This little volume is intended for the practitioner who in the course of events is frequently called upon to perform services of a surgical nature. From lack of space very few alternatives are given in methods of treatment, but that which from personal experience and observation seemed best to the author has been presented. The volume is really a very good thing indeed and the general physician will do well to provide himself with it.

**STUDIES IN CARDIAC PATHOLOGY.** By George William Norris, A.B., M.D., Associate in Medicine at the University of Pennsylvania, Visiting Physician to the Episcopal Hospital of Philadelphia, Assistant Visiting Physician to the University and to the Philadelphia General Hospitals, Physician to the Medical Out-Patient Department of the Pennsylvania Hospital, Fellow of the College of Physicians of Philadelphia, etc. With 85 original illustrations. W. B. Saunders & Co., 1911.

It is a pleasure to call attention to a book that presents some unusual features, particularly if these are at the same time of apparently great value. The unusual and commendable feature of Norris' *Studies in Cardiac Pathology* is the illustrations of specimens which are the basis for the text. The rich museum material of the Philadelphia Hospitals afforded the author excellent examples of the usual and unusual pathological conditions of the heart. Eighty-five splendid photographs are reproduced in this book. Accompanying each illustration, are the clinical and pathological notes relative to the specimen illustrated.

With the illustrations and these notes as a basis, the author develops his discussion of cardiac pathology. The subject matter of the chapters deals with acute endocarditis, chronic endocarditis, diseases of the aortic, mitral, tricuspid and pulmonary orifices, acute and chronic pericarditis, cardiac hypertrophy, cardiac dilatation, cardiac aneurism, cardiac syphilis and congenital lesions.

The author makes frequent reference to the works of others, particularly to those presenting the results of experimental work. The bibliography should be of great value to those doing work on the heart.

The book contains 230 pages, is printed in a large, clear type, on an excellent grade of paper and is a credit to the publishers from the standpoint of composition as well as from the contents. The labeling of the various parts of the illustrations has, in the main, been omitted, an error that should be corrected since the reader will experience some trouble in clearly interpreting the illustrations.

**NOSTRUMS AND QUACKERY.** Articles on the Nostrum Evil and Quackery from THE JOURNAL of the American Medical Association. Part I, Quackery. Part

II, Nostrums. Part III, Miscellaneous. First Edition. Cloth. Price, \$1; with individual's name on cover, 25 cents extra. Pp. 509, with 220 illustrations. Chicago: American Medical Association, 535 Dearborn Avenue.

Every physician whose patients ask for information regarding the efficacy of certain "patent medicines," advertising specialists or other quack treatments, and every layman who desires information on the same subjects, will find "Nostrums and Quackery" an invaluable volume. This means that practically all the medical men and a large proportion of the public have use for a book of this kind. In the last few years THE JOURNAL of the American Medical Association has published a number of articles dealing with the "patent medicine" evil and quackery. The book "Nostrums and Quackery" contains all such articles, elaborated in many cases and embellished with numerous illustrations, while in addition it contains some matter never before published.

The articles in the book do not deal with generalities. They are specific and to the point; they call a spade a spade. The investigations have been made with a thoroughness that leaves the reader in no doubt as to the fraudulence of the quacks' claims or the worthlessness of many "patent medicines." Furthermore, the statements are authoritative, for it is evident that the Association could not afford to speak as plainly as it does if it were not absolutely sure of the facts. In many instances chemical analyses, made in the Association laboratory, are given.

The book consists of three parts, Part I devoted to quackery, Part II to nostrums, and Part III to miscellaneous subjects. These parts are again divided. Under Quackery, for example, we find sections devoted to "Advertising Specialists," "Cancer Cures," "Consumption Cures," "Female Weakness Cures," "Medical Institutions," and other concerns of a similar nature. Under Nostrums there are sections devoted to "Asthma Cures," "Cough Medicines," "Hair Dyes," "Laxatives," "Obesity Cures," "Rheumatism Cures," and other typical nostrum groups. In the Miscellaneous section there are discussed such subjects as "The American College of Mechano-Therapy," "Patent Medicine Makers and the Press," "Molding Opinion in Food Preservatives," and others of equal interest and importance. In fact, the book is not only a *vade mecum* on the nostrum evil but a veritable "Who's Who" in quackdom.

"Nostrums and Quackery" is published primarily to enlighten the public regarding fakes and fakers. It is a duty of every physician to see that his patients become familiar with the contents of this book. The Association is prepared to furnish it in quantities at a very low figure; it also supplies a copy intended for use in the reception room, with the physician's name printed thereon.

## BOOKS RECEIVED

**FOOD VALUES.** Practical tables for use in private practice and public institutions. By Edwin A. Locke, A.M., M.D. Instructor in medicine, Harvard Medical School. pp. 110. New York & London. D. Appleton & Co. 1911.

**OPHTHALMIC MYOLOGY.** A systematic treatise on the ocular muscles. By G. C. Savage, M.D., Professor of Ophthalmology (Defects of the Eye) in the Medical Department of Vanderbilt University, etc., etc. Eighty-four illustrative cuts and six plates. Second edition. Published by the author. Nashville, Tenn., 1911. 8vo pp. 685.

**SOME BIG GAME HUNTS.** By A. H. Cordier, M.D., Professor Surgery University Medical College, etc., etc. Illustrated from photographs made by the author unless otherwise specified. 8vo cloth. pp. 317. Published by the author. Kansas City, Missouri, 1911.

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### ORIGINAL ARTICLES

#### TONSILLECTOMY: WITH PRESENTATION OF SPECIMENS REMOVED BY THE AUTHOR'S METHOD \*

GREENFIELD SLUDER, M.D.

ST. LOUIS

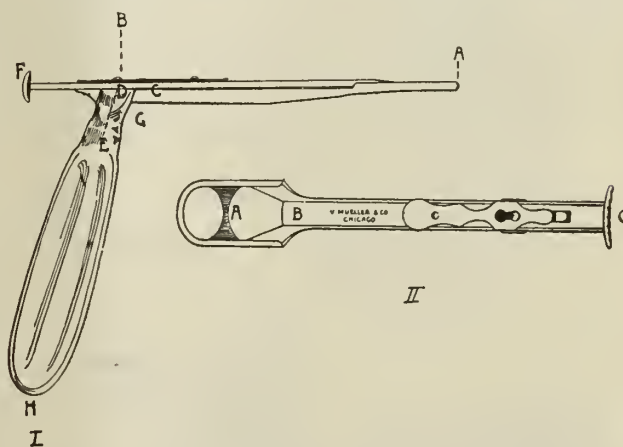
It is not my intention to consider in any way the indications for tonsillectomy. These are considered amply in the recent treatises on laryngology (Ballenger, third edition). It is generally admitted nowadays that the removal of the entire tonsil is much more likely to give satisfactory and permanent results than partial removal. This point was emphasized by Ballenger in 1896 or 1898. This is the experience and the practice of American surgeons — Casselberry, Freer, West, Brown, Richards, Richardson, Blevgad (Copenhagen), each of whom has contributed to the technic; and by many others. It is beginning to be advocated by Europeans.

It is relative to this practice that I should like to present for your observation this afternoon some specimens removed by a method which I described at the meeting of the American Medical Association in St. Louis June 9, 1910,<sup>1</sup> the text of which was published in *The Journal A. M. A.*, March 25, 1911.<sup>2</sup> It requires a guillotine only.

The surgery of the tonsil is not so easy that one method has proved satisfactory in the hands of all operators, just as no other surgery is that simple. I believe, however, that the difficulties besetting the surgery of the tonsil are far greater than may be said of many other organs and parts. This fact has multiplied the methods until they number scores. Celsus, 41 A. D., describes the enucleation by the finger tip and speaks of it as a practice common at that time. Richards and

Richardson are strong advocates of this method at the present time.

Celsus did the operation of tonsillectomy. Probably the surgeons of the Middle Ages who used the strangulating ligature also did it by their method; but the guillotine was devised for the purpose of amputating that portion of the enlarged tonsil which protrudes into the cavity of the pharynx; and no effort was made to enucleate the entire organ by means of it. In recent years the most satisfactory tonsil removals have been done by loosening the organ from the pillars of the fauces, drawing it into the pharynx, and dissecting it out of its bed — the fossa tonsillar



— or by drawing it into the pharynx and placing a snare at the site of its capsule, the wire following in this bed as the line of least resistance. Most surgeons use the cold snare. The galvanocautery snare has been advocated by H. W. Loeb.

The method of scratching or tearing out the tonsil with the tip of the finger is apt to be followed by very considerable shock, according to my experience. The method of loosening and drawing the tonsil into the pharynx for either dissection or snaring, although usually satisfactory, frequently fails for some reason or other. A friable tonsil is difficult to hold — the forceps pull out of the tissue or the knife or snare leaves

\* Read at the Meeting of the Missouri State Medical Association, Kansas City, Mo., May 18, 1911.

1. Jour. Am. Med. Assn., July 2, 1910, page 60.

2. This text contains a detailed description of the anatomy of the parts as well as its variations; also detailed descriptions of the operative procedure.



parts of the organ *in situ*. The great number of tonsil forceps attests the former difficulty and the many tonsil punches for the removal of masses left, attest the latter. A surgeon has advocated transfixing the tonsil deeply in its long

tageous because the wound does not bleed. Dissecting by sharp knives is accompanied by considerable if not by serious bleeding. The method by snaring bleeds much less as a rule. All these methods take much longer time than my method, and each requires much more manipulation. The blade of my guillotine ought to *dull* equal to a *snare wire* such as is ordinarily used for nasal polyps and so be followed by bleeding such as usually follows snaring.

The instrument is a guillotine made strong, with a good handle, and provided with a dull blade which crushes and cuts by being pushed into the soft copper lining of the ring. It is merely Dr. Physicks' (1827) instrument modified to bring out these points (Fig. 1).

The method consists of moving the tonsil out of its anatomic settings—drawing it upward and forward from three-quarters to one inch and then utilizing a marking on the lower jaw to which I have given the name *alveolar eminence*. It is made by the last-formed molar tooth in its socket (with the gum covering it) just above the mylohyoid line (Fig. 2). The tonsil lies posterior to



Fig. 1.—Right half of a mature mandible seen from above, showing alveolar eminence, A, with fully cut third molar and buccinator ridge B.

Right half of young mandible seen from above, showing uncut third molar and the part it takes in the formation of the alveolar eminence A.

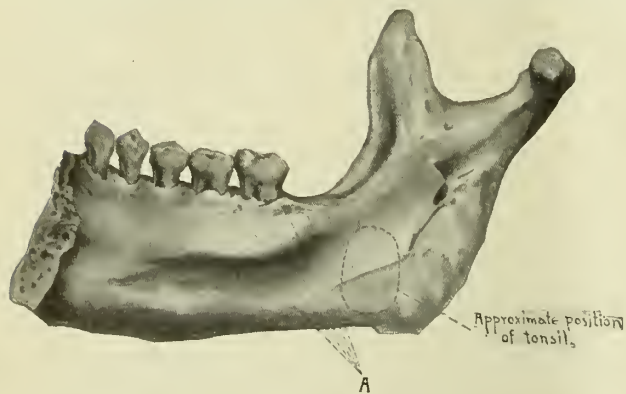


Fig. 2.—Inner surface of the right half of the mature mandible, showing the alveolar eminence, A, and its relation to the usual position of the tonsil.

axis with a strong silk ligature and using this as a means to draw it out. The galvanocautery tip has been advocated by Pyncheon as a means of dissecting the tonsil out, saying that it is advan-

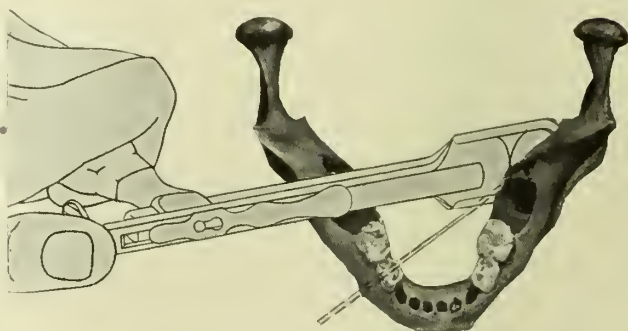


Fig. 3.—A young jaw showing guillotine in position. The dotted lines show the usual position of guillotine for mature jaws.

and below this eminence. A very good idea of the eminence may be obtained in life by feeling it with the tip of the index finger in the mouth. The ring of the guillotine is passed into the mouth from the opposite side backward, outward and downward at an angle of approximately 45 degrees in each direction (Fig. 3). The ring is thus engaged behind and below the tonsil in which position it is applied with enough force to press it outward until it meets the resistance of the ramus of the jaw or the firmly contracted internal pterygoid muscle. This sets the ring firmly behind the tonsil. It is now in that position drawn forward and upward, which movement brings the tonsil out of its original bed on to the alveolar eminence. The prominence of this area is often sufficient, unaided, to push the tonsil through the ring of the guillotine. It is, however, safer not to rely on this, but to let the blade of the instrument gently descend until it is in contact with the tissues and then gently massage the tonsil mass through the enclosed ring with the tip of the index finger of the unoccupied

hand. This procedure is facilitated by turning the handle slightly downward, which makes the area a little more easily accessible. The blade is allowed to close gently as the mass is stroked through the narrowing gap. When the last of the tonsil mass is through, it may be determined very accurately by passing the tip of the index finger gently over the edge of the ring. Should a portion of the tonsil not have gone through the ring it may readily be felt as a hard and somewhat irregular lump under the membrane. Should this occur, the blade is very slightly withdrawn without changing the position of the instrument and the massage repeated. When the mass has gone completely through the ring its distal are is felt to be smooth under the covering membrane. The blade is then forcibly pushed across, using the grip of both hands. It ought to be *dull* because it will then more readily follow in the bed of the capsule of the tonsil and the wound will bleed *less*; but it requires a little more strength to make it cut through. Should it not cut through in all its extent it will have to be stripped off with the tip of the finger. The surgeon ought to note carefully the condition of his blade. Should it get *too dull* it will not cut into the copper lining of the ring sufficiently to

readily be turned over again, restoring the organ to its customary appearance, Figure 4, IV and III. It will now be seen that a bit of the membrane of the anterior pillar has been removed with the tonsil—at least this is my practice. It leaves a more open fossa and fixes the scar more forward. The bleeding and other troubles which have been described by some writers as following such a procedure have not been observed in my experience nor that of my associates. It is not, however, necessary to remove this bit of the pillar. Dr. H. E. Miller tucks it aside as he massages the mass through the ring.

Familiarity with this technic enables the surgeon to remove a tonsil complete in its capsule in from five to eight seconds or even less time.

I submit to you here a number of tonsils (in the neighborhood of a thousand) that they may



Fig. 4.—Tonsil removed\* from young adult: I, internal surface as it appears while still in the grasp of the guillotine, having the appearance of being turned inside out; II, same tonsil, external surface, with the capsule invaginated; III, internal surface after its parts have been replaced; IV, external surface after capsule has been replaced.

sever the tissues. Should it be *too sharp* it will not follow so well in loose connective tissue of the bed; but will *cut off* any little *irregularities* on the capsule side of the tonsil, button-holing the capsule unnecessarily; and the wound bleeds *more*. When he directs his attention to these points he very readily learns to sharpen his blade to just the right degree or blunt it should it be too sharp. It is to be noted that the pillars were not loosened from the tonsil.

The tonsil is still in the grasp of the guillotine after it has been cut from its bed. Examination of it shows it to be, as it were, turned inside out. By bringing it up on to the alveolar eminence and stuffing the ring of the guillotine over it or by stuffing the tonsil through the ring on the end of the finger, the convex capsule side of it has been invaginated and the blade cuts it off in this condition. Figure 4, II and I, is a drawing of a tonsil just as it is loosened from the grasp of the guillotine. The capsule may



Fig. 5.—The guillotine in position, showing its general relationship to the bones.

serve statistically. Some of these were removed by my associates, Dr. H. E. Miller, Dr. C. Armin Gundelach, Dr. F. G. A. Bardenheier and some by me. I do not believe that each of a thousand tonsils may be removed perfect by any method. From an inspection of these specimens it will be seen, however, that this method averages well. I have kept careful record of the last hundred tonsils removed in my own practice. One case, a lady 42 years old, had suffered from frequent quinsy all her life. In the effort to remove one of her tonsils it was found that no capsule whatever came out with the tonsil; but when the wound was healed there was no tonsil tissue left in fossa. In other words, the capsule was tightly adherent to the subjacent tissues and could not be separated by the blade;



but the entire tonsil tissue was shaved off of the capsule. The wound had the appearance of a perfect tonsillectomy when healed. In two other instances the capsules were button-holed where they were adherent to the underlying tissues. In another instance a very small shaving of tonsil tissue was left in the arch of the soft palate. The tonsil in this instance was not large or prominent and rose unusually high in the palate and extended almost to the median line.

This method is applicable to all tonsils, large or small, protruding into the pharynx or submerged in its wall, and for all ages.

It has the advantages (1) of rapid execution with (2) minimum surgical violence, (3) producing a wound which bleeds little. It requires, however, accurate knowledge of the anatomy of these parts.

3542 Washington Avenue.

#### NOTES ON PRESENT DAY CRANIOCEREBRAL SURGERY \*

NORVELLE WALLACE SHARPE, M.D.  
ST. LOUIS

Surgical attack directed to the skull (and to a lesser degree, its contents) is without doubt of ancient lineage. The brilliant achievements of the waning years of the nineteenth and the early years of the twentieth centuries serve to emphasize the relative Sahara sterility of the preceding Dark Ages.

It would prove, on this occasion, but a needless task to review the historical progress of this field of surgery; for though in comparison with other fields personal vagaries and wide-spread faddism are rather significantly absent, yet we are confronted with a sad lack of healthful progress and growth. Therefore it would seem appropriate that an historical survey of craniocerebral surgery be ignored, and that the attention of this Society be directed to memoranda essentially practical in character. Obviously in such a digest many matters of absorbing interest must needs be omitted.

##### I. THE CRANIUM

1. *Pathologic conditions* which merit surgical consideration are various well-known disease processes which attack the skull, and the conditions which result from trauma. The former rarely involve the major portion of the skull and are subject to methods of procedure common to similar processes elsewhere.

2. *Fractures.*—Trauma of the skull produces as its most significant result fractures. These are of considerable variety and extent. The "green stick fracture" of the adolescent shaft finds its analogue in the dented fracture of childhood and the dented table of more advanced

life. Fracture is encountered in the simple, compound, comminuted, punctured, depressed and complicated types, and in various combinations. Phelps, in his admirable analysis of 1,000 cases, has given us the following statistics in regard to site:

1. Fracture of cranial vault.....	213
2. Fracture of cranial base.....	570
3. Injuries of cranial contents independent of fractures.....	217
	1,000

3. *Manifestations and Diagnostics.*—Contrary to the common conception, vault fractures (in so far as the mere fracture is concerned) are usually more serious than base fractures. This is obvious from the greater facilities afforded for depression, fragmentation and displacement. Base fractures, as a rule (and by contrast) are of but slight significance; there is little or no displacement, the fragments adjust themselves quite fairly; it is well known that even at autopsy fissures are, at times, distinctly difficult to orient. These fractures heal readily and usually without complications; in themselves, they demand no special intervention.

The crux of the problem lies not in the fracture but rather in the condition of the cranial content. That this differentiation is sound (and not mere casuistry) is borne out clinically by the common knowledge that many uncomplicated base fractures go on to satisfactory recovery under the conventional *laissezfaire* treatment—ice bags to head, confinement to bed, cathartics, and theorizing regarding the probable course of the fissures.

Beyond question this hitherto philosophic attitude of masterly inactivity in the presence of the condition known as "fracture of the base" in large measure has been developed by a failure to differentiate between the fractured skull and the changes wrought thereby in the cranial content. The manifestations of vault fractures are closely allied to those of fractures elsewhere—such as deformity, preternatural mobility, fragmentation, change in percussion note, etc. This evidence may or may not, be readily developed but should be sought by sight, palpation, percussion, and, whenever indicated, by exploratory operation.

Frequently fracture of the base is an extension of vault fracture; this combined fracture may therefore exhibit signs peculiar to both classes; but as the graver intracranial changes are commonly of the base type, the literature shows that its classification is ordinarily as a base fracture.

Hill (Leonard) in his admirable physiologic studies has shown that the brain is almost as incompressible as water; in addition, we know that the skull (with the exception of the foramen magnum) is essentially a closed, non-yielding case. It is but a step more for us to realize that compression of the brain is probably a serious condition. Clinical observation and laboratory

\* Read before the St. Louis Medical Society, Dec. 23, 1911.

findings agree in the conclusion that brain compression is a most serious condition. So serious is it that its actuality or even possibility should constantly be borne in mind not only in fracture cases but in other conditions independent of fracture to which allusion will follow.

It is a matter of regret that to the mind of the everyday practitioner the manifestations of the fracture are largely, if not wholly, blended with the manifestations of the traumatized cranial content. This unfortunate condition of diagnostic indifference must be definitely abandoned if salutary progress is to be accomplished in this field. As may be inferred from the preceding notes, the signs of cranial fracture are reasonably definite, but the fracture itself (save in cases characterized by extensive comminution or depression) of no great significance. The injury wrought by fracture varies from quite insignificant changes to that which may produce instant death; yet we should not forget that the most serious content injuries are not invariably secondary to the most extensive cranial lesions.

Probably the most commonly sought evidence is that afforded by peripheral disturbance. Such disturbance or abnormality is evidence of intracranial trouble; whether due to direct osseous impingement, hemorrhage or tissue laceration. Obvious bleeding is the most suggestive sign in base fractures; it is more commonly in evidence and more significant than in vault fractures. On exploration it may be found in the diploë, surrounding the meninges, or within the brain structure or cavities. It has long been known that bleeding from the ear, nose, mouth, and ecchymotic conjunctival and subcutaneous tissues affords highly presumptive evidence of a base fracture. Considerably over 50 per cent. of the cases that exhibit bleeding are observed to bleed from the ear, significant of fracture of the petrous portion of the temporal bone; somewhat less than 25 per cent. bleed from nose or mouth, suggestive of fracture of anterior or middle fossa; hematemeses directs attention to roof of pharynx or nose; subcutaneous ecchymoses (conjunctiva, orbit, mastoid, neck, etc.), are found in about 30 per cent., and are suggestive of orbital wall, anterior fossa and occipital fracture. In addition we may find serous discharges from ear, nose and pharynx, localized pain, headache, vertigo, convulsions, slowing of pulse, transient increase in blood-pressure. If disturbance be more profound, cerebral vomiting (in about 30 per cent.), choked disk,<sup>1</sup> loss of sphincteric control, and varying grades of loss of consciousness.

1. "Choked disk": the Albutt-Cushing adaptation of *stauungsödem* of the Germans. As a descriptive phrase of a neuro-retinal stasis or edema, it is sufficiently accurate and is preferable to "papillitis," "optic neuritis," etc. These are suggestive of infection and inflammation (a theory not now held by our clearest thinkers). Choked disk is a manifestation of increased intracranial pressure. Very suggestive reports by the Johns Hopkins School, in 1909, show that such a condition readily may be produced by the insertion within the skull of fluids, bags, etc. It is well known that choked disc subsides when suitable decompression and drainage has been made.

The classic picture of the text-books is largely erroneous, many of the commonly noted "signs and symptoms" persistently absent themselves. Much satisfactory study of peripheral manifestations has led us to a fairly accurate knowledge of cerebral localizations. These manifestations may be caused by bone or blood compression, by nerve or tissue interference. It is not difficult to mistake visible blood actually from an accessible source for hemorrhage supposedly due to a deep cranial lesion; this must be constantly guarded against. Pulse changes are not dependable as a diagnostic agent save that they suggest intracranial disturbance; a subnormal pulse may, in an individual instance, be a normal pulse; and asymmetry of the radials may have existed before the time of injury; and even though dating subsequent to injury has (with our present knowledge) no differential value. It is frequently correlated with loss of vesical control and pupillary abnormalities. The latter, while suggestive of intracranial disturbance, has not as yet proved of more extended value, for we find both recovery and death occurring with abnormal pupils, and, *per contra*, normal pupils are frequently in evidence. Of similar significance is loss of sphincteric control. If intracranial tension be sufficiently increased we may find an engorged venous circulation, particularly of eyelids and scalp and an engorgement of the retinal vessels which might be appropriately classified as the prechoked disk stage, to be followed (if relief is not given) by the true choked disk. When subdural hemorrhage exists (or is suspected) lumbar puncture may prove valuable. Its value and accuracy notably decrease after thirty-six hours. Puncture at fourth lumbar interspace (conveniently found by a line connecting the crests of the ilia), about one-quarter inch from median line, directing upward and a trifle inward. If bloody fluid is obtained this may be due either to tinged cerebrospinal fluid or to the puncture wound. The latter should rarely occur if an appropriately small, non-cutting, flexible platinum needle is employed. I warn against other forms of needles; at least two instances have come to my knowledge in which the more rigid steel needle has been broken off as the result of a quick flinch on the part of the patient. Blair has suggested, if blood be found at the fourth interspace, that a secondary puncture may be made at the second; in both instances he advises catching the fluid in two tubes. This excellent plan I believe to be rarely necessary provided the proper needle and method be employed. Allusion, in a later section, will be made to lumbar puncture when its use is attended with unquestioned risk.

4. *Treatment*.—All fractures of the skull should be suggestive of operation, though obviously all fractures do not demand surgical attack. If severe shock be present, exploration should be delayed until satisfactory reaction has developed. In cases of severe or progressing intracranial



hypertension causing or notably complicating shock, surgical attack should be made even though the patient's condition be not favorable; for the evident reason that his condition will not improve until the hypertension be relieved.

The conventional methods of exposing the cranium, trephining, elevation and reposition of fragments, checking of hemorrhage, etc., are excellent. Detached fragments are best removed; they frequently become infected and undergo necrosis. It is not an unfair criticism of past cranial surgery to state that it has been too conservative. Operations often have been delayed until serious brain damage has developed; furthermore, the methods of opening the skull and exposing the damaged areas have all too frequently been characterized by undue timidity with consequent limitation of usefulness.

The subtemporal decompressive operation of Cushing (to whose masterly work in this field we are all deeply in debt) finds an increasing sphere of usefulness in base fractures characterized by intracranial hypertension; for even though the source of a bleeding may not be ascertained and checked, yet the mere relief of tension is not only ample warrant but, indeed, an imperative indication for such attack. This is best made through an oblique suprazygomatic incision, the temporal muscle split and retracted, and an area from 3 to 5 cm. in diameter rongeured away. Drainage, if necessary, it best performed through a suitable dependent stab incision rather than through the sutured line (a good working rule to be adopted in other cranial operations), thus reducing the tendency toward a subsequent fungus cerebri.

Fortunately for both patient and surgeon, the brain does not succumb readily to infective processes, but preserving its vitality, strongly tends to automatic restoration of functions that have been impaired. The fact that cerebral abscess occurs in approximately but 1 per cent. of all cerebral cases (the proportion existing between vault and base as 2 to 1) is a valuable document in evidence. The surgery of to-day (as contrasted with the surgery of yesterday) is reckoning hopefully and confidently on these characteristics: and on these characteristics is based, to a large extent, its success.

Peripheral disturbances are often largely, sometimes wholly, due to pressure: cerebral tissue impairment is largely the result of pressure; therefore, *remove the pressure.*<sup>2</sup>

Crowe of Johns Hopkins has shown that formaldehyd is present in the cerebrospinal fluid after urotropin has been administered—but sufficient time has not been afforded for exhaustively

testing its efficacy in this field of surgery. Evidence to date leads to the hope that a valuable factor for combating infection has been made accessible to us. I would suggest the critical employment of this drug before surgical attack in infected areas, or where the probability of a sequent infection is strong, also in fracture cases where operation is declined or for satisfactory reasons, not advised.

It is important, in the interest of more accurate knowledge, that autopsies be sought in all fatal fracture cases.

## II. ABSCESES

I have stated that the brain offers a very substantial defence against infection, and that when injured or infected there is a strong tendency toward restoration of function. Study of large series of cases has shown that abscess is found in approximately 1 per cent. of all cerebral cases; and that as a complication (or sequence) of fractures is to be noted about twice as frequently in vault as compared with base fractures.

The diagnosis of abscess is to be made (like other intracranial conditions) by study of the signs and symptoms which result from its presence: in addition, a history of trauma, bronchiectasis, empyema, etc., will prove helpful; while last, but by no means least, a study of the blood for the conventional changes due to existing suppuration should be made. If the abscess is within the cortex, or enveloped by the meninges, changes of the cerebrospinal fluid (i. e., lymphocytosis, increased serum-albumins, microorganisms, pus, etc.) may be anticipated. If the abscess be of sufficient size to alter the intracranial tension, a choked disk may be manifested, or if not quite sufficient to cause this phenomenon, a prechoked disk may be in evidence.

The diagnosis of abscess (alike with growths to be later discussed) is, however, by no means invariably easy. The history may be obscure or altogether lacking (as for example an unknown individual found unconscious); blood changes may not warrant a definite conclusion; finally, the abscess may occur in one of the "silent areas." Chronic diffuse peri-encephalomeningitis, that obscure, baffling, often latent condition, is to be constantly borne in mind when studying a middle or advanced age case. Occasionally this condition, "the product of civilization and syphilization" (von Kraft-Ebing), is known to closely simulate cerebral abscess.

Pressure changes are probably our most reliable diagnostic clues, and I reemphasize the necessity of a study of the retinal field. Important at all times is an accurate diagnosis of intracranial conditions, but it should be a matter of routine knowledge that *the brain is in greater peril from a developing abscess (both from the standpoint of pressure and infection) than from the more leisurely onslaught of either a cyst or a tumor.*

2. The following tables, which deal with the imperative problem of pressure, merit consideration; they present information from somewhat different viewpoints: *Cushing*: primary, laceration of cortical vessels; secondary, extracranial accumulation; tertiary, cerebral edema. *Kocher*: 1. symptoms absent due to good circulatory compensation. 2. objective signs begin to appear; 3. objective signs reach maximum; 4. objective signs fail, death results from bulbar anemia.

Early and accurate diagnosis of a cerebral abscess is therefore imperative.

A most instructive case illustrating the extreme difficulty of diagnosis was recorded in 1907.<sup>3</sup> This case had been carefully studied by Dr. Taussig (A. E.), and with a diagnosis of probable cerebral abscess was submitted to me for operation. No abscess was found on the left side (the suspected site): the patient died on the table. The brain was promptly removed and carefully sectioned. No abscess was found anywhere within the cranium. Occasionally it is a matter of no slight difficulty to find the pus pocket (after exposure), when the collection is rather small, makes no surface markings, or occurs in a "silent area." A thorough search is then indicated. I have found a grooved director serviceable, thrust radially from the exposed area. With two cranial openings this method will permit an exhaustive orientation of an entire hemisphere. It may be objected that this method is unreasonably severe. I was fortunate in the above case (q. v.), to have had the opportunity of studying the actual effect of such exploration. The brain was sectioned within twenty or thirty minutes from the time of exploration. The conclusion was:

"I record, therefore, the fact that the director steadily and smoothly inserted, without deviation from its axis of entry, will produce neither appreciable laceration nor visible alteration of brain tissue, save that its track will be marked, and may be traced in section, as a minute scarlet dot, a shade larger than the readily recognized circumjacent puncta vasculosa. This hemorrhage into the temporary canal formed by the entry of the director is highly insignificant. Closure of the canal by reapproximation of the separated wall is not only practically complete, but probably instantaneous, and doubtless permanent. In no instance was a patent canal section found, nor in any instance did this puncture traumatism differ in any detail from the facts as here recorded."

The abscess when found should be gently evacuated, disorganized tissue removed, and drainage made through a dependent-stab incision in the scalp. A reliable preparation of formaldehyd should be exhibited for the purpose of maintaining the integrity and usefulness of the cerebrospinal fluid.

### III. TUMORS

1. *Frequency.*—Tumors of wide variety are found within the skull, nor may the condition be held as a rarity especially if we include cysts, meningeal growths and the granulomata. Gliomata are most frequently noted with endotheliomata, sarcomata, carcinomata (the latter two commonly metastatic) following, to be succeeded by cholesteatomata (those sebaceous masses, without vessels and frequently symptomless). Der-

moids, teratomata, lipomata and fibromata are rare; likewise neuromata, enchondromata, angiomas and psammomata (calcified growths). Cysts are found; and tubercular, syphilitic and actinomycotic masses, commonly classified as granulomata.

I have recorded the resistance of brain tissue to infections; the same property, but less accentuated, is to be noted in its behavior toward growths; exception, however, should be had as regard glioma. This growth finds comparatively slight resistance to its insidious progress. It is well that the opinion of Oppenheim should be recalled, viz., "*the brain is a seat of predilection for new growths.*" To the general practitioner is commended the admonition of Bruns: "*When the general practitioner states that he never encounters such cases, it is tantamount to an admission that, unrecognized, they have passed through his hands.*" Surgeons only too rarely see them in the early stages, for the initial periods are consumed by antisiphilitic, or other routine measures.

Progress in this field of surgery has forced us to the conclusion that brain tumor (as noted above) is not a rare lesion; thus, von Beck (Heidelberg) found at autopsy brain tumor to average 1 : 120; Seidel (Munich) 1 : 80; Cushing (Baltimore) 1 : 57;<sup>4</sup> while Bruns holds that "*2 per cent. of all patients classed as neurologic have brain tumors.*"

2. *Manifestations and Diagnostics.*—The manifestations of intracranial growths depend partly on site, partly on size. The scope of this paper forbids an extensive discussion of cerebral localization, the symptomatology, and much of the accumulated data pertinent to cerebral tumors; the subjoined articles will prove helpful for those specially interested.<sup>5</sup> The long accepted notion that a growth ordinarily produces contralateral manifestations still holds good; though increased experience accentuates the fact that many cases exhibit a predominating homolateral picture. In general it may be said that the more marked the manifestations the more marked the growth, and the more marked the growth the less hopeful the prognosis. Probably in no field of surgical activity is an early diagnosis more imperative; in no other field is the critical study of early manifestations more needed. It is the acme of folly to adopt a dilatory policy, an evidence of ignorance to philosophically await the crystallization of definite diagnostic signs. *Choked disk should not be sought as an early sign; rather should it be held significant of marked pressure; our efforts should be toward the discovery of the*

4. Cushing records a steady increase in diagnosed brain tumors in the Halstead clinic. This fact is doubtless due to the increased diagnostic acumen of the passing years, and the augmentation of cerebral material attracted by the skill of Cushing.

5. Cushing: Section on Cerebral Surgery in Osler's Modern Medicine, 1910. Oppenheim: Die Geschwülste des Gehirns. Nothnagel's Spec. Path. u. Ther., 1896, Bd. ix. Duret: Les Tumeurs de l'Encephale, 1905; Bruns: Die Geschwülste des Nervensystems. Zweite Auflage, 1908.

3. Taussig and Sharpe: "Report of a case wrongly diagnosed cerebral abscess, with the surgical findings." Surg., Gynec. and Obst., June, 1907, p. 704.



*prechoked disk picture.* It should be considered a reflection on diagnostic knowledge that would permit a case to remain under observation until exophthalmos or amblyopia should develop—immeasurably worse, the supervention of blindness.

I wish to emphasize but two or three points. In addition to the neuroretinal changes due to increased pressure, Bordeley and Cushing have directed our attention to another pressure manifestation that promises to win for itself a permanent recognition. They have noted that a *dyschromatopsia* is a sufficiently constant manifestation of intracranial hypertension to warrant serious consideration. *The fields that most frequently interlace are red, blue and green.* This seems to be a *fairly early sign*, and *disappears after decompression.* We would seem justified, therefore, in no longer classifying this suggestive condition as merely a manifestation of hysteria. *Choked disk is not solely a sign of tumor; it is an evidence of abnormal pressure; this holds good for any condition that increases pressure (which obviously includes tumors).* It is one of our most important signs, should always be sought, but delay never should follow, if it chances not to be clearly defined. The *prechoked disk* should receive more critical attention than heretofore granted.

It has been noted in percussing skulls that "*a cracked pot sound*" has been elicited. This may be found in any condition that produces sutural diastasis; it may also be encountered where fracture exists. Obviously it is not an early sign; it is rather an evidence of enormous increase of intracranial tension.

Probably to the neurologists do the surgeons owe the greatest debt for clarifying many obscure matters, in particular suggestions regarding intracranial conditions based on study of peripheral manifestations. From Babinski we have received the sign commonly known as the "*Babinski reflex.*" The ordinary response of the toes when the sole of the foot is stimulated is flexion. Babinski has shown that when a lesion of the pyramidal tract exists a similar stimulus will produce contralateral extension (in particular, of the first toe). This sign is not always in evidence, but when present is always suggestive of contralateral intracranial disturbance. Recent notes by Chaddock (C. G.)<sup>6</sup> have directed attention to a most interesting phenomenon, which I venture to style the *external malleolar reflex of Chaddock.* He has discovered that when a lesion (or disturbance) of the pyramidal tract exists, if stimulus be applied circumjacent to the contralateral external malleolus, a *definite extension* of the toe will follow. An isolated case is observed,

now and then, where *flexion* is manifested. *It is of considerable importance to remember that whether extension (the more frequent) or flexion (the exception) be in evidence, the significance (up to date) is held to be the same, for normally no response whatsoever is encountered.* This reflex is not difficult to elicit; probably the only caution that need be offered is that if departure is made from the designated territory, and the sole approached, a tremor, possibly an actual flexion, of the fifth toe will be developed, which is devoid of significance.

While the Chaddock reflex is commonly contralateral in manifestation, it will be found to be homolateral where intracranial pressure is sufficient to affect the opposite pyramidal tract. Chaddock states that his reflex will not be evidenced in cerebellar lesions—that it is not due to a lesion of the involuntary motor tract of von Gehuchten. It would seem that the Chaddock reflex is not only earlier in manifestation, but more accurate in significance than the reflex of Babinski, which has done such yeoman service.

Study of the preliminary communication of Chaddock will prove interesting. Among other conclusions, he states:

"In no case presenting frank toe-phenomenon from the sole have I ever failed to elicit the external malleolar sign; in several cases presenting no Babinski and many presenting doubtful Babinski, I have found the external malleolar sign reliable as indicative of central lesion proved by operation to exist, with its disappearance after the operation. I have seen it develop alone, to be joined by a Babinski, and persist after Babinski had changed to normal; I have failed to find it once in a case of abolition of all skin reflexes from cerebral lesion without Babinski; I have never seen it in a normal individual."

"These and many other cases have proved to my satisfaction that irritation of the external inframalleolar area causes no reaction normally; that the external malleolar sign is usually present when Babinski is present; that it is often present when Babinski is absent; that it may come before, accompany a Babinski, and outlast it; that its presence or absence is a great clinical aid in the interpretation of doubtful or occasional abnormal movements excited from the sole; that it signifies disorder of an organic nature in the spinocortical reflex paths."

We are all constantly assailed by "new things" which are thrust on us. Some of these merit consideration and withstand critical testing; the vast majority find their properly insignificant level. On no man does the necessity for cultivating and maintaining a judicial attitude weigh more heavily than on the surgeon. Among much exploited agents at our command is the x-ray; from this subtle adjuvant much has been

6. Chaddock: "A preliminary communication concerning a new diagnostic nervous sign." *Interstate Med. Jour.*, xviii, 7. "An explanation of the External Malleolar Sign Made with a View to Incite to Study of It to Determine Its Place in Semeiology," *Jour. Mo. State Med. Assn.*, viii, 4.

demand, more has been hoped, and probably even yet more has been claimed. So important is it that we keep in touch with the actual possibilities of the *x-ray*—neither unduly exalting nor censoriously minimizing its value—that I have asked Dr. Carman (R. D.) to give me, from the standpoint of an expert, the last word. He was good enough to submit the following, which is worthy of thoughtful attention:

"The roentgenologic examination of the head is attended with many difficulties. The structures are dense and shadows are superposed, thus hindering the detection of lesions. But with careful and patient radiography and painstaking interpretation of the plate, decisive information may often be elicited. Finding a position that will show a lesion of uncertain situation and extent may require repeated examinations, and may sometimes even then be a matter of good fortune. Nevertheless, an effort is worth while, and an enlarged experience will probably lead to better results in this slightly cultivated portion of the roentgenologic field.

"Cranial and intracranial lesions in which diagnosis has been facilitated by the *x-rays* include: (1) fractures; (2) abscesses; pus accumulations in the accessory sinuses of the nose and the mastoid cells; (3) tumors; (4) diseases of bone; (5) foreign bodies.

"1. Fractures with depression or formation of callus can be demonstrated in the majority of instances. Fissured fractures are less readily shown, especially if small. Fractures of the base are most difficult of all. However, Rotch reports a demonstration in the case of a child. In children, the skull being thin, radiography is apt to succeed better than in adults, and fluoroscopy may be satisfactorily used.

"2. Pus in the maxillary antra, the frontal sinuses, the ethmoid and sphenoid cells, and in the mastoid can be definitely shown, as a rule, by the rays.

"In some of these conditions many specialists rely much on the radiographic findings. The literature of intracranial abscesses, thus discovered, is scant.

"3. Tumors, both cerebral and cerebellar, have been revealed in some published cases. Obviously their demonstration is not an easy matter. Kassabian reports a case of thrombosis which he successfully skiagraphed. Enlargement of the pituitary body has been shown.

"4. Bone degenerations are sometimes demonstrable, depending on their nature and extent. Osteomyelitis, sarcoma and carcinoma of the bone are just about as readily shown in the skull as elsewhere.

"5. Foreign bodies within the cranium can usually be seen. Most commonly, of course, these are bullets. Of late, their localization has become practicable and quite accurate, either by means of

the general localizer or by wire cages fitted to the head."—*Carman*.

3. *Treatment*.—Alike with fractures and abscesses, intracranial growths are always suggestive of operation, whether exploratory, palliative or radical. It is a matter of common observation that many patients are subjected to more or less prolonged antisyphilitic treatment in the hope that the existing condition is eitherluetice or, if not, may be benefited by such measures. Without doubt many cases have suffered from this policy—many brains been seriously damaged. The fact should be impressed on students and the general practitioner that such a policy fails to do justice to the patient, and seriously reflects on the physician. Unless definite response is promptly secured to antiluetic measures, delay should no longer be followed, surgery should be invoked. Especially is this true if evidence of intracranial hypertension is at hand; the problem resolves itself into relief of pressure by at least a palliative operation; the etiologic factor obviously receiving such attention as may be indicated. Antisyphilitic measures have, as yet, proved unsatisfactory; they should, with our present knowledge, not be relied on.

It would be gratuitous to emphasize the necessity of decompression operations on the granulomata whenever significant pressure exists (alike with the more strictly tumor group); if there did not exist a well-defined indifference, or at least non-appreciation, to the havoc created by intracranial hypertension. Without at this point further elaborating on the efficacy of medical or other non-surgical measures, the point is made that the internist should summon to his aid the surgeon to relieve intracranial hypertension and to avoid the shocking consequences induced thereby.

It is a matter of no little interest that a surgical attack, purely palliative in character, a decompressive operation in fact, will frequently produce remarkably excellent results. Troublesome vomiting, agonizing headaches, serious impairment of vision, distressing conditions alike to both patient and physician, receive great relief (indeed, at times complete relief); so that a case unfit for radical operation may have life not only prolonged, but prolonged in comparative comfort and enjoyment. I am confident that this fact is, to many, unknown; it should be given widespread endorsement by the faculty.

I am willing to go a step further and state that this simple operation is so beneficent in its results that the patient is justified in expecting that it be urged on him for thoughtful consideration; from which it is not difficult to infer that the courts will hardly hold a practitioner to have exercised "due skill, care and diligence" unless



he has strongly recommended that a decompression operation be given an opportunity to afford relief.

So imperative is the problem of pressure that it would seem advisable to identify it as the most important need to be met. It matters not whether pressure is exerted directly (by the growth) or indirectly (increase of intracranial tension, obstruction of sinuses, foramina, etc.), the net result is identical, it is inimical to brain integrity. In all cases, therefore, where pressure changes are manifested, operation is indicated. The decompressive operation of Cushing is not difficult: it is preferably made over a silent area of the brain, the dura should ordinarily be opened, no effort at bone replacement should be made, the flap, consisting of the scalp and incised dura, is sufficiently elastic to afford relief. The ideal site is beneath the temporal muscle, the zygoma should be shelled from its periosteum and removed; when subsequently proliferated it is somewhat less prominent but serves to maintain an approximate facial symmetry that is not unpleasing. For subtentorial growths decompression may be accomplished by rongeur-ing out a sufficiently ample aperture in the occipital bone but not over the tumor. Here also an adequate flap is obtainable. Lumbar puncture at times is employed either as a diagnostic agent or to relieve excessive pressure. In certain cases where the supraforaminal structures have been forced down on and within the foramen this procedure is highly dangerous, for a fatality may be speedily induced by paralysis of the respiratory center. This occurs by the withdrawal of cerebrospinal fluid from below, a diminution of intraspinal pressure (which acts as a sustaining column to the intracranial structures), a prompt driving and wedging downward on the foramen magnum of the medulla; death results from respiratory failure. So grave is this disaster, and so interesting is its study, that I venture to quote a note of Cushing:

"During the course of a subtemporal decompression (a single large tubercle in left cerebellum having been suspected) owing to the great tension of the dura, a lumbar puncture was performed before opening this membrane. The fluid, under great tension, spurted for a moment from the needle, but ceased to flow after about 4 c.c. had escaped, when respiration almost immediately ceased. Under artificial respiration the dura was quickly incised, and though for a few moments normal breathing was resumed, it soon ceased and the heart continued to beat for three hours as an isolated organ; it doubtless could have been kept in action under artificial respiration for a period indefinitely longer."

The proper treatment of such a condition is to avoid the catastrophe by making a preliminary decompressive operation (preferably subtemporal) in order to control the intracranial ten-

sion; lumbar puncture may then follow. If the condition be a cerebellar growth and the tension is marked, it is wise, by way of an occipital section, to tap the posterior cisterna and thus drain the cerebrospinal fluid from above. Lumbar puncture may then follow, if indicated.

If, however, the surgeon is thrust on the horns of the dilemma (respiration has ceased, cardiac action is suspended, or most feeble in character), artificial respiration should be immediately started and maintained while a free section of the occiput down to and including a portion of the foramen magnum is made. This will permit a liberation of the cerebellar and medullar impaction within the foramen. A further experience of Cushing bearing on this problem is most suggestive. He mentions a heart that continued to beat for *twenty-eight hours* under purely artificial respiration. At that time the brain, exposed by osteoplastic resection, was found gray in color, without circulation. Stimulation of the motor fields by strong faradic current produced no contralateral movements. In another case artificial respiration was maintained (tracheal cannula and bellows) for *three days*. Cardiac action then ceased, following an exhibition of adrenalin.

While dwelling on untoward casualties, it may be well to remind ourselves that it is poor surgery to make a decompressive operation over the site of a growth, for it will be found that the tendency to vascularity is increased, with consequent increase of mass, and a more pronounced herniation. From this another practical rule may be drawn: Exploratory operations should by preference not be transformed into decompressive attacks—rather decompress elsewhere.

When dealing with otherwise inaccessible growths, the "outward dislocation" technic of Cushing will be found helpful. Considerable mobility is thus secured by employing a preliminary or coincident craniectomy.

#### IV. OUTLOOK

But a word need be added in regard to the future of craniocerebral surgery. The temptation has been resisted to discuss some of the more unusual surgical procedures. And yet one would be remiss were no mention made of the fascinating work done by Cushing and others on the pituitary body ("l'organe énigmatique" of van Gehuchten). As you doubtless know it was supposed by our forebears to discharge mucus or phlegm (pituita) into the nose. Seated on the sella turcica, it has hitherto proved inaccessible to the surgeon and merely a theme for speculation for the physiologist. It would seem, however, that at last experimentation is yielding definite data. It is apparently essential to life. Extirpation (in dogs) develops within a few days, or at most a few weeks, the condition known as apituitarism or cachexia hypophyseopriva; the

ultimate outcome is death. In general it may be said that an excess of gland (hyperpituitarism) probably produces or largely contributes to gigantism (in youth) and acromegaly (in more advanced life); while a deficiency of gland (hypopituitarism) tends to an accumulation of an excess of fat, together with an infantile type of sexual apparatus in youth, and a tendency toward the same condition in the adult.

It is believed that the day is not far distant when cerebral apoplexies will be subjected to exploration and alleviative attack; when something tangible shall be accomplished in cerebrospinal infections and that somewhat vaguely defined group of intracranial hypertension and edemas that are associated with meningitis, encephalitis, uremia, etc.

#### V. SUMMARY

1. The day of masterly inactivity and philosophic speculation has been replaced by the day of an aggressive technic based on animal experimentation, critical observation and study from the clinical branches of medicine, and the increasing use of autopsy material.

2. This field of surgery will be found to increase its usefulness and make its most signal advances at the hands of men who, by fondness for the work, and skill developed by training, are peculiarly well equipped.

3. For the greatest benefit to accrue to the patient it is imperative that he be no longer submitted to prolonged periods of observation, nor subjected to various forms of medication; rather should he be placed under the control of suitably equipped men with the view to early surgical measures.

4. The progress of the future, like the progress of the present, rests on critical study of our material *in vivo* and *post mortem*; and the employment of animals for research.

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#### THE IMPORTANCE OF BACTERIOLOGIC EXAMINATION OF WATER AND THE INSPECTION OF WATER-SUPPLIES \*

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Since it has been definitely established that certain diseases are transmitted through water, water-supplies have been subjected to the closest scrutiny. The establishment of good water-supplies has, however, been mainly limited to cities of considerable size; that is, in cities where efficient health boards exist.

It is quite a difficult task to make the ordinary lay person believe that a water which is cool, clear and sparkling is unfit for drinking purposes.

\* From the Pathological Laboratory, University of Missouri.

In rural communities very few people live who have the least conception of the transmissibility of diseases by water. This is not said in criticism of the people who live in these communities but is the natural resulting condition which exists because there are no persons who make it their business to look after the establishment of pure water-supplies.

Let it be clearly understood that I do not believe it takes a person with extraordinary ability and training to detect flaws in a water system. One must know, of course, the diseases which are transmitted through water and learn the most probable sources of pollution. This means that the greatest amount of evidence is to be elicited from inspection.

Many times it is impossible or one is denied the privilege of inspecting a water-supply. It then becomes necessary to depend on bacteriologic and chemical examinations in an attempt to determine the possibility of pollution. Neither of these procedures can be relied on as positive evidence that a water is not contaminated with material which would prove deleterious to the health of human beings. The reason for this statement is obvious: we may be examining a sample of water which contains no sewage bacteria while the main body of water does, or the pollution occurs periodically and is not to be detected except by numerous examinations.

The chemical examinations are conducted in order to determine if an excess of organic material is present and such substances are detected by determining the amount of nitrates, nitrites, ammonia, etc. The chemical examinations are not performed in this laboratory so I will not speak of them in detail.

There are three classes of diseases which are water borne: these are the typhoid and paratyphoid infections, dysentery and Asiatic cholera. Rarely are other diseases spread through water.

The lay idea prevails that to determine the presence of pathogenic organisms one simply examines a few drops of the suspected water under the microscope and easily recognizes the germs of typhoid fever, dysentery and cholera. This conception is far from true. With the most skilled methods these organisms are rarely isolated from polluted water. The organisms sought are the ones most prevalent in sewage, the colon group. If they are detected in any considerable number the water is to be condemned because it means that material is present which possibly contains pathogenic organisms.

No clearer understanding of the sources, dangers and detection of pollution can be obtained than by studying specific and illustrative examples. Let us first consider the pollution of rivers and streams. It is a common practice to dispose of sewage and waste material by running it into the streams. Little danger exists if such material



is not allowed to flow into the stream close to the water intake. This is, however, frequently overlooked and readily becomes a source of pollution. The following is an example:<sup>1</sup>

The town of Parkville, Mo., is located about 12 miles northwest of Kansas City, on the Missouri River. The town has a population of nearly 1,500 inhabitants, and Park College, located there, has an enrolment of about 400 students. There is a sewerage system in the town with which about one-third of the closets and the sewers of the college are connected. The water-supply is furnished from a plant owned by the school. Water is pumped from the river into a reservoir and from the reservoir into the mains.

On Aug. 7, 1909, a case of typhoid fever occurred in Parkville. The house where this case was located is on the sewerage system. About this time, for a period of from twenty-four to forty-eight hours, there was no current where the water intake was located. About four weeks later an epidemic of typhoid fever occurred at the college. There were between thirty and forty cases. Boiling of the water was begun immediately. A favorable report, based on a bacteriologic examination of the water, having been received by the school authorities early in October, the boiling of the water was discontinued.

About the 15th of November, a second outbreak occurred (about fifteen cases) at the college. The last case occurred December 1. One death occurred at the college, none in the town and country.

The 1st of December this laboratory was asked to make an examination of the water. Samples of tap water were collected by myself and showed enormous numbers of colon bacilli. Two sewer outlets were located within 300 feet of the water intake and conditions had existed so that sewage could be easily carried into the water intake. These conditions were quickly remedied and no more epidemics of fever have occurred. Here it is very forcibly shown that that a single bacteriologic examination will not suffice for the determination of pollution.

The pollution of surface wells is very common in small towns and rural communities. The contamination occurs because the wells are located in low places so that they catch the surface drainage or they can easily be polluted from underground. A very common cause of the latter condition is the existence of open cesspools. By an open cesspool is meant a construction identical with the ordinary cistern, open at the bottom, not cemented, so the sewage, which is run into it, can gradually seep into the surrounding soil. Very little attention is paid to the nearness of wells, by persons installing cesspools. Recently this laboratory was asked to settle a dispute between

the citizens and city council of a small Missouri town. It was quite a common practice in this town to dispose of waste material by running it into open cesspools. The council had investigated the matter and concluded that such disposal of waste material was dangerous because of the possibility of pollution of wells. On visiting the place it was found that all the wells went to a certain sand stratum just below which there was solid rock. All of the cesspools were dug to the same level in order that the sewage could readily diffuse into the soil. One cesspool was within 50 feet of a living well and a bacteriologic examination of the water from this well showed it to be loaded with sewage bacteria. Regarding the pollution of wells from such sources, Harrington<sup>2</sup> has the following to say: "It is a practice only too common, even on estates of considerable size, where the excuse of limited area cannot obtain, to locate the well and cesspool very near together. To avoid the necessity of having to remove the contents of the cesspool as occasion demands when this receptacle is made water-tight, and to avoid the expense attending this kind of construction, the bottom is generally left open, so that the house sewage may drain away into the surrounding soil. Connection between the cesspool and the well may take considerable time or may occur quickly, but, once established, contamination goes on uninterruptedly. Often it happens that the direction of the flow of the filth through the soil is wholly away from the well, and contamination may never occur; but this is a point that can never be determined in advance. It is a common belief that, if the well is located in higher ground than the cesspool, there can be no danger of pollution of its water. This, however, is a most fallacious proposition, for it is not so much the location of the outlet of the well that determines the possibility of pollution, as the relative position of the cesspool and the point where the water enters the well."

The depth of a well oftentimes gives persons the idea that water from deep wells is always pure and never contaminated by surface drainage. This is not always the case as the following will show:

A small epidemic of typhoid fever and intestinal diseases occurred in a girls' boarding school with a rather large enrolment. This school had its own water plant and felt quite sure the water was of first quality. The well from which it was obtained was 800 feet deep. People often came from a distance for this water because it was so pure and palatable. There was also a cistern on which great suspicion rested and immediately the use of water from this well ceased. This laboratory was asked to make a bacteriologic examination of the waters from both of these

1. THE JOURNAL Mo. State Med. Assn., 1910, vi. No. 9.

2. Harrington: *Prac. Hyg.*, p. 344, Lea Bros. & Co., 1905.

wells but we were denied the privilege of inspection because of the possibility of inciting unrest among the student body. Water was collected and sent to the laboratory under directions, and a test showed the water from the deep well heavily polluted, while the cistern water gave no evidence of sewage bacteria being present. It was hard to make the school authorities believe that such a condition existed, so the tests were repeated. This time more sewage bacteria were found in the deep well water than at the first examination. On this evidence an inspection of the plant was made. A flush closet was located within 15 feet of the deep well and the engineer said the waste pipe passed within a few inches of the casing of the well. He also said that when pumping, steam would escape from the closet. This showed that the pipes below the cement floor were burst. He had removed some pipes and found them rusted out. They were imbedded in cinders. The placing of metal pipes under cement is not an uncommon practice and is a bad one because they rust out in a very short time. In this instance every time the closet was flushed the waste material seeped around the casing of the deep well and constantly polluted the water.

Frequently sources of pollution exist around water-supplies which seem nearly impossible to overlook. This laboratory was asked to make an inspection and bacteriologic examination of water from a city which obtained its supply from shallow wells. The wells were located in a very low place and on the surrounding hills were many open closets from which sewage material could easily drain. The plant was quite a distance from any houses and no water closet was noted on inspection. When the employees were asked where they answered the calls of nature, they replied that such material was deposited on cinders and burned. One would expect the most conscientious people to do this but a great doubt existed as to whether the ordinary lay person would make such a procedure a routine practice. On inspecting the wells, great amounts of feces were found within 30 feet of one well, located so that the drainage would carry it into the well. That such conditions actually exist are hardly believable.

Another bad practice is the construction of drain pipes, from houses to cisterns, which are open to pollution. As an example the following will suffice: A small epidemic of typhoid fever occurred in a country school. A bacteriologic examination of the water was negative. On inspection an open tile was found projecting above the surface of the ground, at the corner of the school house, into which the drain pipe from the house loosely fitted. It is not highly imaginary to suppose that waste products found their way into the well in this manner. Urina-

tion into this tile, by irresponsible young children, is very probable.

From all of the above the conclusion is drawn that water-supplies demand rigid investigation and, while inspection is the most important, all methods have their value, and, if possible, all should be applied in attempting to detect pollution.

#### SURGICAL INDICATIONS IN MECHANICAL URINARY DISTURBANCES \*

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In order to enable me to accentuate the anomaly and postoperative condition of the bladder, the observance of which is responsible for this report, I must beg your indulgence while I hastily review a few necessary anatomic and physiologic points.

The urinary bladder is formed by a dilatation of the intra-abdominal portion of the allantois. It lies normally between the anterior pelvic wall and the uterus and vagina, and is supported by two anterior and two lateral true ligaments (which are derived from the rectovesical fascia) and the urachus superiorly; five false ligaments, two posterior, two lateral and one superior formed by peritoneal folds. Normally the reflection of peritoneum which passes from the uterine fundus to the vault of the bladder, leaves the uterus at about the height of the internal os, and reflecting onto the posterior surface of the bladder forms an anterior culdesac, or vesico-uterine fossa. The posterior wall of the urethra and the bladder is intimately attached to the anterior intrapelvic surface of the vagina and uterus as high up as the internal os. This uterine attachment, which may vary considerably, is one of the important factors in mechanical disturbances of the bladder, and in the two cases herein reported, was so extensive that I consider certain deductions justifiable.

While the true ligamentous supports fix more or less firmly the base of the bladder and urethra, the bladder proper or urine-containing portion is limited only in its movements by its degree of distention and position and condition of the lower abdominal and pelvic organs.

Under normal conditions, the urinary act is directly under the control of the brain and the vesicovaginal centers. The sensory nerves of the bladder, stimulated by stretching or other irritating conditions in the bladder wall, convey the message to the brain. Conditions being appropriate, the vesicospinal centers produce relaxation by inhibition of the sphincters (normally tonically contracted) at the same time stimulating into activity the detrusor muscles of the bladder

\* Read before the North Missouri Medical Society, Oct. 19, 1911.



wall, thus completing the act. Abnormal mentality, irritation or disease of the vesicospinal center may disrupt this physiologic cycle, as will also diseased conditions of the bladder, which stimulate the sensory nerves of that organ.

The difficulties then which are usually encountered are either due to retention or incontinence, either of which may be due to one or more of three causes: (1) mechanical causes; (2) nerve disturbances; (3) diseased conditions of the urinary tract.

The object of this paper is not to discuss diseases of the urinary tract; therefore I will utilize only that portion of the classification which deals with disturbances due to mechanical causes. All of us have, no doubt, had occasion to wait on unfortunates who are victims either of chronic retention or incontinence, and we know that there are few diseased conditions that can produce more disagreeable annoyance, ranging from social ostracism to severe neuroses, than either of these; my object, then, in reporting these diametrically opposite cases, is to encourage perseverance in discovering and removing the cause of a condition that is so inimical to the comfort of the afflicted individual.

**CASE 1.**—Mrs. N., aged 40. Referred by Dr. H. Family history negative. Personal history elicited no pelvic, menstrual, or urinary disturbances previous to pregnancy and the birth of a child, 24 years ago, since which time almost total incontinence had existed. Patient had complete control while lying or sitting quietly, but standing, walking or any physical exertion resulted inevitably in sudden and complete loss of control. Twenty-four years of this state of affairs had succeeded in shattering a once stable nervous system, and she had on two occasions attempted suicide.

Genito-urinary examination revealed the following: External genitalia and adjacent parts severely excoriated; numerous carunculae at orifice of urethra; second degree tear of perineum, with accompanying cystocele and rectocele. Uterus prolapsed with bilateral cervical tear. Bimanual palpation. Uterus freely movable but strongly retroflexed; palpable tumor in right ovarian region. No undue sensitiveness in pelvis or abdomen. Neither kidney palpable.

Cystoscopic examination by Dr. Burford showed nothing of importance except dilated urethra and engorgement of the vessels of the mucosa, especially at the proximal end of the urethra. Repeated urinary analyses revealed no local or ascending infection. Urine normal in character. Physical and neurological examinations showed no definite organic lesion.

Acting upon the supposition that all of her trouble was due to mechanical causes and her nervous symptoms only secondary, I advised radical repair of entire genito-urinary tract, and proceeded as follows in three stages: Removal of carunculae under local anesthesia. Awaited healing of same and found no improvement; under general anesthesia did a curettage, trachelorrhaphy and perineorrhaphy. Abdominal section revealed uterine fundus retroflexed into culdesac. Right ovarian tumor of lemon size attached to appendix and lying above the uterine fundus. Tumor and appendix removed, and uterus delivered into incision; left tube and ovary free, but the attachment of the bladder extended up over the fundus, one inch below the crest of the uterus on its posterior surface. This attachment presented a perfectly symmetrical and normal appearance, except for the height of its attachment. There

were no adhesions or other signs of an old pelvic peritonitis to bring about this abnormality, which undoubtedly had existed from birth. In detaching it, the peritoneal reflection passed smoothly over onto the bladder surface and this organ was peeled down from the uterus with gauze to the height of the internal os. The anterior wall of the bladder was then attached by two catgut sutures to the posterior pubic area and to the parietal peritoneum at the lower end of the incision, adhesions being promoted by scarification of the contiguous surfaces. The uterine fundus was brought well forward by a modified Gilliam, and the abdomen closed with a liberal amount of sterile olive oil to prevent adhesions to the denuded uterine surface.

Patient left the hospital on the 14th day. The result was perfect control until bladder became distended with several ounces of urine, when the sphincters, so long inactive, were overcome and involuntary expulsion occurred. Her ability to control gradually increased as the tone of the musculature improved, but in six months, being still imperfect, the following operation under local anesthesia, was performed. A quarter-moon shaped denudation was made straddling the meatus with the points extending below the inferior margin of the meatus and the upper convex border reaching to within one-half inch of the clitoris. The urethra and meatus were freed for a short distance and the margins of this denuded area approximated. This raised the meatus about  $\frac{3}{4}$  inch above its normal point in the vestibule and consequently angulated the urethra proportionately. Within one week, healing was complete and at the present time, two years since the last operation, patient is free from all annoyance and in perfect health.

The deductions are simple: abnormally high fixation of the bladder to the uterus; relaxation of the pelvic outlet following labor and laceration of cervix and perineum; prolapse and retroflexion of uterus permitting intra-abdominal pressure to exert itself on its anterior wall and the consequent stretching of the bladder, resulting in atony and paralysis of the sphincters and involuntary expulsion of its contents due to these many mechanical derangements.

**CASE 2.**—Was referred by Dr. H. Unterberg for operation. His personal records of the case are here appended. "Miss M. C., aged 21 years. Had not urinated voluntarily for three years. History: three years ago, suffered attack of severe crampy pains in lower abdomen. Had never had any disturbance of micturition. Previous health had been good. Operated three years ago in Indianapolis. Patient was told that ovaries had been removed. No information given of any other findings. Following operation, patient was unable to urinate and was catheterized by physician. Inability continued and patient catheterized self regularly.

"One year later second operation performed in Chicago. Some adhesions were found and broken up, but no relief from retention. Nov. 25, 1911, was referred by Dr. E. T. Urban. Patient 21 years old, of medium height, weight 130 pounds, rather gloomy, sallow complexioned, skin pale, mucous membrane anemic looking. Patient has a divergent strabismus; appears dull and sleepy but brightens perceptibly when interested. Attitude slouchy, rather careless about dress; tongue coated, breath foul. No motor cranial nerve disturbances; heart and lungs normal; there is some tenderness over the abdomen particularly over the ovarian regions. Bladder not distended. Cystoscopic examination of bladder and examination of urine showed a chronic cystitis. Frequent attempts at urethral catheterization were unsuccessful. (Bier) Patient was placed on tonic treatment and bladder irrigated. She

improved physically and somewhat mentally, but still could not void urine voluntarily. She had complete retention and at times appeared to have suppression as on catheterization only small quantities were obtained.

"Between November, 1910, and February, 1911, she was subject to severe paroxysmal pains in the bladder which we could only control by hypodermic injections of morphia. She was placed in the Rebecca Hospital February 2. Temperature 102 F. (due to cystitis), pulse 108. She was catheterized only by nurses and quantities of urine obtained were far below normal. By careful treatment, her condition was improved and temperature brought down and on the ninth day was referred to the writer for exploratory operation."

Operation. Median incision, wide abdominal scar removed, fibrous adhesions between omentum, small intestines and parietal peritoneum; Uterine fundus, cecum, and sigmoid all involved in dense adhesions; these were separated and it was found that at the previous operations, the ovaries, left tube and appendix had been removed. The uterus was retroverted, but not firmly fixed, below normal size and its entire anterior surface and fundus were covered with the bladder, spread out flat over this area, and pulled away from its natural position, close to the symphysis. This bladder attachment was separated from the uterus by gauze dissection. Bladder proved to be quite large, thin walled, and of flabby consistency. The peritoneum covering the anterior bladder surface was contused with gauze, and sutured in several places to the parietal peritoneum between the inferior incision angle and the symphysis; the uterus was brought forward by an intra-abdominal shortening of the round ligaments. All oozing of blood checked by hot saline towels, sterile olive oil poured in and abdomen closed. The urethra was then dilated with the little finger and the volume of the bladder cavity tested. All signs of the cystitis, previously referred to, had disappeared and bladder capacity exceeded normal. External genitalia and urethral meatus normal and hymen intact.

Following operation, patient required catheterization for one week. On the eighth day, the nurse reported that patient had voluntarily passed some urine. This continued at frequent intervals, the amount gradually increasing to from 18 to 20 ounces daily. The intervals gradually lengthened and approached the normal. She left the hospital on February 28, and at the present time, seven months since the last operation, the bladder is functioning normally.

In this case, it appears that the abnormal condition was brought about by a postoperative peritonitis, as the difficulty existed from that time. The attachment of the bladder to the uterus was evidently due to postinflammatory adhesions; while in the first case there was entire lack of evidence of any previous peritoneal involvement. A history of marked suppression extending over a period of three years is always questionable. It is more likely that a larger quantity was obtained at each catheterization than the patient thought, yet it is true that a greater amount per day was collected by the nurse after operation than before. The two cases, therefore, parallel to this extent: both possessed the same deformity of the bladder, i. e., high uterine fixation. In both the bladder was large and roomy, thin-walled and of flabby consistency. In both the difficulty disappeared after simple correction of the mechanics. Their difference lies in the fact that one exhibited total incontinence, the other, complete retention. In Case 1 there was a completely relaxed pelvic outlet with

severe prolapse of the pelvic viscera, and in the upright position the pressure on the bladder was sufficient to empty it involuntarily. In Case 2 the perineum was intact, the urethra normal and not shortened or distorted by cystocele (as in Case 1), the sphincter was active, and the detrusor power being nullified by the bladder fixation and uterine retroversion, left everything favorable for retention. It is not unwise to make careful observation of the bladder in all intra-abdominal work involving that region. Most of us can, no doubt, recall a case or two wherein the urinary difficulties accompanying pelvic ptosis fails to disappear following operation. I am firmly convinced that purely nerve center derangement is the prime etiologic factor in a very small proportion of these cases, and that if a closer attention is given to the careful reestablishment of the normal anatomy and mechanics of the bladder, the normal physiologic act will reestablish itself; that this endeavor may be stimulated, is the sole object of this paper.

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#### DOEDERLEIN PUBIOTOMY \*

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Four years ago, pubiotomy was regarded in the German clinics as the one great obstetrical operation, but as all other medical and surgical discoveries in time are limited to certain spheres, so pubiotomy is becoming more and more limited. Döderlein has made the statement in discussing this operation that over-zealous optimism must be guarded against as much as critical pessimism and that our conclusions must be reached from the statistics of different operators. As an example of the truth of this statement, may be given the views published by Peham of Vienna and Bumm of Berlin. The former operated on but one case and then condemned pubiotomy *in toto*, while the latter in his enthusiasm reported one of his early cases in a manner not justified by the history on record. In our own country, Hirst of Philadelphia concludes that the operation will gradually become obsolete, as the results of cesarian section improve and if the phrase more and more limited be substituted for the word obsolete, but few American obstetricians will dissent.

The present consensus of opinion is that the operation should be performed by a skilful hand. It has been said that the chief difference between a professional and an amateur is that one has command of the minutiae, while the other has not. This statement might be exemplified by the first pubiotomy performed by Fehling, where such a terrific hemorrhage occurred that both operator and assistants became greatly excited and the

\* Read in the Surgical Section of the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting, held at Kansas City, May 16, 1911.



visitors left the clinic with the impression that the dangers accompanying the operation were of too grave a nature to admit it to general favor. But how different the opinion when watching Bumm after he had thoroughly mastered his technic and had learned what to avoid, or on watching Döderlein when he had already over thirty cases to his credit.

At Dresden, in 1907, Professor Stoeckel gave as his conviction that the operation could be performed without any hesitation in the private home, but he found the assembly almost to a man against him, and in this respect four years have changed the opinion of the profession but little. When the puerperium runs a smooth course, it is so easy to say "the operation is so simple, why not use the private dwelling?" And here is the danger of drawing our conclusions from too few cases, for who can prognosticate no complications? Hence the majority of our conservative specialists approve of the hospital as the only proper place for the operation, and the minority agree that if the home must be used, both operator and assistants should be thoroughly acquainted with the technic.

The question is now advanced, "What is the general practitioner in the remote locality to do?" and no other than Döderlein himself made the declaration last fall that craniotomy was the one indication for such a condition. This appears to be a very radical assertion, but stop and try to substitute a better way out of the difficulty. Usually when an obstetrician loses either mother or child, if he is conscientious, he feels that perhaps he has made a mistake somewhere, and the only way out of the difficulty is the proper education in our medical schools and the gradual elevation of the laity to a plane where they can appreciate the necessity of an early obstetrical examination.

In 1906 Döderlein taught that a woman with a conjugata vera of between 8.5 and 9.5 cm. and carrying an average sized child, should be delivered not later than the thirty-sixth week after conception: conjugata vera between 7.5 and 8.5, let her go to full term and perform pubiotomy; conjugata vera between 5 and 7.5, often a field for choice. Recently he placed the limit for a pubiotomy at 6.5 cm., but both Leopold and Baisch consider 7 cm. as small as one may go. And this brings up another point, the measurement of the conjugata vera. On one occasion Döderlein made the measurement 5 cm., and the practitioner who had sent the patient to the clinic, 7 cm. A cesarean section was performed and after the patient's death the measurement of the general practitioner was found to be the correct one.

To-day almost all articles contain the advice not to operate if the woman is a primipara, but often we may see the author doing what he advises others to avoid, and why not if it be true,

as Bumm says, "The art is to select the proper time, not too early, and unnecessarily, on the other hand, not too late." The statement seems too broad, although true in general. One of the advantages claimed for the operation is the possible spontaneous birth. If then a case be selected where both mother and child are in good condition, the pains are strong, and the soft parts are properly dilated before sawing the bone, the only objection appears to be the too great separation of the sawn ends, causing the soft tissues to bear the brunt of the rapidly descending head, and this separation can certainly be limited.

As regards the indications in an obliquely contracted pelvis, opinions still vary, Pestalozza of Rome being strictly against it, while Voguet of Paris speaks highly in its favor. Here again we may take the midway. One case of Döderlein's not only had a slightly oblique pelvis, but a curvature of both legs toward the same side. During the rapid delivery of the child, the ends of the sawn bone separated the breadth of a hand, and when the patient was seen two weeks later, but little approximation had occurred. Döderlein shook his head and said: "Ich hätte nie die Pubiotomie anggeführt, hätte ich die Beine erst gesehen."

Till comparatively recently, the pubiotomy was also considered the best operation, if the child's head be but slightly enlarged and the mother's pelvis normal: but now many prefer the cesarean section. In fact, there are many who never do a pubiotomy even though the patient has fever, preferring to do a supravaginal amputation of the uterus. The fever though is now generally accepted as a contra-indication for the section and an indication for pubiotomy if the contraction be not too great.

Although fever does not contra-indicate pubiotomy, and Veit says the operation is preferable to cesarean section only when streptococci are proved in the birth canal, the danger of an infected hematoma, periostitis, peritonitis or cystitis is not to be overlooked and some very serious sequelæ have been reported by conscientious authors which others might consider of no particular importance. Also the maternal mortality, generally given as 9 per cent. in cesarean section and 2 per cent. in pubiotomy, must be considered and the possible permanent widening of the pelvis in the latter (six out of twenty, according to Leopold).

Many of our best practitioners still insist on premature labor and this procedure in their expert hands and with selected cases gives good results; but it is not always easy to estimate the time of gestation, and if the child be constitutionally weak it certainly is greatly handicapped. Baisch in his work, "Narrow Pelves," has shown that pubiotomy has given far better results as regards the life of the child, than premature labor, both procedures being executed by experts.

In summary, the pubiotomy may be regarded as an operation of choice with an average sized fetal head or a head but slightly enlarged, a conjugata vera of not more than 9 cm. and not less than 6.5 cm., no marked varicosity of the pelvic veins and a non-rigid os. The operation to be performed in a hospital by a skilful hand assisted by trained associates.

The results of the operation are so dependent on the technic that a few words concerning the same cannot be amiss. The patient is rendered as aseptic as possible from the umbilicus to the knees, and anesthesia given to the surgical degree. Two assistants support the legs and at the same time press upward on the trochanters. The operator stands before the vulva and pulls the skin over the symphysis sharply upward before cutting vertically downward on the pubic spine. The incision made need not be more than 1 cm. in length. With two fingers in the vagina, a curved needle, with a small hook on the end instead of a point, is guided downward through the incision hugging the pubic bone. The outlet incision in the labium majus is practically 1 cm. in length and is made only after pulling the skin from over the spine firmly downward. It is easily seen by this method the two cutaneous openings are close together and but few of the engorged pelvic veins are injured. A Gigli saw is then attached to the hook and remains next to the periosteum when the needle is withdrawn. Probably twelve firm pulls causes the bone to be sawn through. The saw is then removed and any hemorrhage that may present itself is controlled by pressure within the vagina, the soft parts being held against the pubic bone. Such a hemorrhage usually ceases after four or five minutes' treatment and the operator next busies himself with the separation of the parts at the site of operation. If the pubiotomy has been well selected, the ends of the bones need not separate more than two finger breadths; and to prevent further injury to the soft parts or the sacroiliac joints proper support is necessary. Adhesive plaster 3 inches wide wrapped about the pelvis three times over the trochanters and symphysis pubis gives the required support without interfering with the birth whether the delivery be immediate or expectant. A suture in each cutaneous incision suffices and a collodion dressing is applied. This method of procedure was exercised in the following cases:

CASE 1.—Mrs. Y., white; aged 22 years. Height 5 feet, 3 inches. Weight (when not pregnant) about 112 pounds. Menstruation fairly regular, last period latter part of March, 1909. Primipara. Seen first at 5 a. m., Dec. 28, 1909. Had been having severe labor pains between two and three hours.

*Physical Examination.*—Heart and lungs normal. Colostrum in both breasts. Fundus uteri about two finger-breadths from ensiform. Breech above, slightly to right of median line. Head easily palpable just above pelvic brim. Small parts to mother's right.

Back to mother's left. Fetal heart sounds below, anterior and slightly to left of median line.

*Pelvic Measurements.*—Int. spin. 24 cm. Int. grist. 27 cm. Int. troch. 31 cm. Ext. conj. 18.5 cm. obliq. conj. 10.25 cm. Ext. conj. vera 9 cm. Int. tuberos. isch. 8.75 cm. Ant. post. of outlet 5 cm. Vagina very small and rigid. Os completely dilated. Cavity of pelvis empty. Pains severe at three minute intervals till 10 a. m., Dec. 28, 1909.

Examination showed no advancement of head. Membrane ruptured. No engagement at 12 o'clock noon. Patient anesthetized and vaginal soft parts dilated manually. Pubiotomy (Döderlein) performed on left side of pelvis. But little hemorrhage. Separation of sawn ends of bones to about two finger breadths. Three inch adhesive plaster passed three times around pelvis, principally over trochanters and patient returned to bed. Strong pains, continued and as head descended into pelvic cavity, the bladder was pushed upward by two fingers in vagina. Living baby born at 2:45 p. m. December 28, 1909. Vaginal laceration of slight second degree. Placenta in vagina 20 minutes later. Vaginal laceration repaired with twenty day double No. 2 catgut. Four silkworm-gut sutures in perineum.

Child, boy, 8½ pounds, caput suc. over right parietal bone.

*Head Measurements.*—Oc. front, 11.9 cm. Oc. ment. 13.1 cm. suboc. breg. 10 cm. biparietal. 10 cm. bi-temporal 8.3 cm.

On day following confinement, a hematoma of left labium about the size of a small hen's egg. Hematoma gradually disappeared during the ten days following. Sausage shaped sand bags placed under trochanters while patient lay in bed to relieve tension on adhesive plaster. Patient kept on back for first nine days. Catheterized for five days after confinement and then urinated voluntarily. But little milk in breasts and baby partly fed on condensed milk. Baby progressed during first week and appeared normal in every respect, but on morning of the ninth day, it weighed slightly more than seven pounds. At noon it began showing signs of pneumonia and died at 7 p. m. of same day. Dr. Thompson's report of the pathological examination is as follows:

Typical areas of pneumonia alba so often found in syphilitic fetuses. No macroscopic or microscopic evidences of acute infectious or tubercular processes. Thickening of blood-vessels shown especially well in liver and spleen, most marked in adventitia which is characteristic of lues. Also an apparent connective tissue increase in liver, not marked, but sufficient to give organ an abnormal induration. Induration much more marked in spleen than liver, where a general connective tissue proliferation is seen throughout sections. In kidney glomeruli, much more prominent than normal and show marked proliferative changes so that entire glomerular space is filled with nuclei. In lung walls of blood-vessels, show marked thickening typical of lues.

Later it was learned that the baby's grand-father had had syphilis and that the father had returned from the Philippines with a severe luetic infection. Mother allowed to leave bed on the twentieth day and walked very well one week later. Has had absolutely no inconvenience from the operation. Became pregnant again and was examined about the middle of April, 1911. Child in R. O. A. presentation and pelvic measurements approximately the same as when taken in December, 1909. A slight mobility of ends of sawn bone. Labor began with hard pains at 4 a. m. on April 23, 1911, and at 7 a. m. of the same day, the os was found completely dilated, but the head was still above the brim. Suddenly during an exceedingly severe pain, the bones separated at the site of the former operation to the extent of about a finger breadth and the head came down. An episiotomy was performed to save the scar tissue of the perineum and



the child soon delivered. A boy, 8¾ pounds in weight, with the following head dimensions:

Oc. frontal, 12 cm. Biparietal 9.7 cm. Suboc. bregmatic 9.5 cm. Bitemporal, 9.8 cm. Bimastoid 8.9 cm.

On fourth day child showed signs of distress and was immediately put on the inunction treatment. Ten days after birth, child weighed three ounces more than at birth and up to the present is developing splendidly.

Mother received no particular support for her pelvis and was not catheterized once.

Sat up ten days after delivery and walked well without any pain two days later.

CASE 2.—Mrs. C., white, aged 34 years. Height 5 ft. 4 inches, weight (when not pregnant) about 135 pounds. Menstruation from fifteenth year regular and free from pain. Married at 24 years. Last menstruation last week in September, 1909. Multipara. Walked when nine months old and said to be a sickly child till fifteenth year. Knows of no particular disease with which she suffered. Has been delivered of six children, only two of which gasped after birth. Every delivery instrumental and very difficult. Children large. Husband's family tubercular.

*Physical Examination.*—June 11, 1910. Heart and lungs normal. Abdominal wall very thin but tense. Fundus uteri almost at ensiform. Breech above, median; head just above pelvic brim; small parts to mother's left; back to mother's right; fetal heart sound fairly distinct to right, below and anterior.

*Pelvic Measurements.*—Int. spinal 25.5 cm. Int. crist. 28 cm. Int. trochant. 31.5 cm. Ext. conj. 19 cm. True conj. (Estimated by four experienced obstetricians) at between 7.5 and 9 cm.

Mother and child apparently normal up to the morning of August 20, when the former complained of irregular pains in abdomen. Catharsis and mild sedatives together with bed rest produced but little result, so far as relieving the pains was concerned. Upon vaginal examination the cervix was found to be about 2 to 3 cm. in length and the internal os closed. Patient complained continually during the 21st and at 9 p. m. the os was almost completely dilated and the lower zone of the uterus thin and tense. At midnight the membranes were ruptured and a large amount of amniotic fluid escaped, the abdominal walls at once becoming lax. At 2:30 a. m. August 22, the head was still above the brim and the pains regular but very weak. Pubiotomy was decided upon and as the occiput was to the mother's right, the operation was performed upon that side and adhesive plaster passed over the trochanters and about the pelvis. After one-half hour the fetal heart sounds were found to be weak and at times indistinct so the head was pressed into the brim and forceps carefully applied. The sawn ends separated to the extent of about two finger breadths as the head was brought down but no injury to the soft parts was to be found after the birth of the child. Mother was allowed to turn in bed, as she wished and experienced no trouble in urinating. Arose on the fourteenth day and walked well four days later without any complaint. Highest temperature during puerperium 100.4 F.

Child, a girl; weight 7⅓ pounds; was resuscitated after birth with but little trouble.

*Head Measurements.*—Front, ment. 8.22 cm. Bimastoid, 8.6 cm. Biparietal, 9.8 cm. Oc. front, 11 cm. Suboc. breg. 9.2 cm.

Child seemed very weak but appeared to gain strength as day advanced and on the night of the 22d, gave every indication of improving. At 4 a. m. August 23, baby's respirations began to grow weaker and at 7 a. m. it died without having had any convulsive seizure. No post-mortem was permitted, but Dr. Marchil-

don reported the maternal blood taken on August 21, 1910, to give a positive Wassermann reaction for syphilis. Mother seen again on March 15, 1911, and stated that when she returned home after the operation, she ran the sewing machine steadily for two weeks after which she experienced considerable pain in the pelvis. After resting a few days, the pain disappeared and although compelled to do rather hard work at times, had been absolutely well ever since.

CASE 3.—Mrs. W., colored, aged 22 years; height 5 feet 5 inches; weight 119 pounds. Menstrual history good; no abortions; no particular sytemic diseases. Last menstruation March 1910. Primipara.

*Physical Examination.*—Dec. 17, 1910, 1 p. m., Hutchinson's teeth; scaphoid scapula; no evidence of rachitis; heart and lungs normal; fundus uteri about one finger breadth from ensiform; upon abdominal palpation, fetal breech found above and median, head just above pelvic brim, back to mother's left, small parts to mother's right.

*Pelvic Measurements.*—Int. spin. 21.5 cm. Int. crist. 25 cm. Int. trochant. 31 cm. Ext. conj. 18 cm. Conj. vera 8 cm.

Vagina small, os dilated. Head above brim. Bag of waters said to have ruptured three days previous and patient's pains dated from this time. Pains at no time severe but regular. Heart sounds of child heard indistinctly below, anterior and to mother's left. Pubiotomy (Döderlein) performed on left side after the dilatation of soft parts and sawn ends separated slightly. In his endeavor to see more distinctly one of the assistants holding the left leg, let it fall and the sharp sawn edge pierced the vaginal mucosa. The head was pressed down into the pelvic cavity and a forceps delivery made because of the weak fetal heart sounds. Patient's pelvis bound with adhesive plaster, but the end of the bone that had perforated the vagina could not be depressed enough to properly approximate the other end. A vaginal laceration of the second degree was repaired with No. 3 chrome catgut and supported by silkworm-gut sutures in perineum. Placenta easily expelled ten minutes after birth by Credé method.

Child slightly asphyxiated but readily resuscitated. Head in state of extreme molding.

Two hours after birth, mother's temperature and pulse went up but gradually improved until on the following morning she had apparently recovered from the shock accompanying the birth. Patient had a slight edema of left labium that soon disappeared. A foul smelling discharge from the vagina continued till about Jan. 7, 1911, when a vaginal examination revealed the denuded end of bone to be readily felt through the opening in the vagina. Two days after delivery patient had a chill and elevation of temperature, but a swelling of the jaw, proved to be caused by an abscessed tooth. Later on electric light bulb over patient's bed burst and the glass entered one breast, causing it to become abscessed. It is thus no wonder that patient had but little milk and artificial feeding of the child had to be resorted to. Patient was catheterized for about one and one-half weeks. Her appetite was good throughout her hospital stay and her only complaint that the adhesive plaster hurt her. This was relieved by partially removing the old and applying broader bands. Patient walked with assistance on January 8th. On February 13th patient left hospital without complaint. Walked well and the ends of the bones at the site of operation better approximated. Vaginal rent closing in with scar tissue.

Baby died two and one-half weeks after birth without any warning. Post-mortem showed only a slight meningitis and Dr. Buhman was unable to find any evidence of syphilis, either microscopically or chemically.

# THE LIMITS OF THE CATHETER IN THE TREATMENT OF CHRONIC ENLARGEMENT OF THE PROSTATIC GLAND \*

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Until within the past few years, or the memory of all of us, the catheter was regarded as the main reliance of both the surgeon and the physician for the relief of the discomforts and dangers incident to prostatic hypertrophy.

Its application has always been palliative and not curative, and this palliation is applicable only to one class of a variety of conditions met with in the enlargement of this gland, and then with great annoyance to the patient.

In a second class of cases it gave only periodical relief, nullified in its use by the development of a distressing cystitis, it played a potent factor in producing and always brought with it the dangers of being an infection carrier to the delicate viscus beyond the gland.

In a third class of cases it completely failed to give relief by reason of the encroachment of the gland on the urethral canal preventing the admission of this instrument to the bladder.

This unsatisfactory aid in the second class and the complete failure of relief in the third class; stimulated surgeons to seek measures and means of a more general applicability.

Then came Battini with his cauterizing operation, and this only in recent years. This was a blind, irrational, unsatisfactory and dangerous procedure, and met with favor and trial by only a few, the genito-urinary specialist, and not the general surgeon, advocating and practicing it as a curative operation. It was short lived and is now obsolete.

The first real useful departure from the old catheter treatment was made only a few years ago by Bellefield in this country and Arthur McGill in Europe. These operators placed suprapubic prostatectomy within the reach of the general surgeon. This procedure served the profession well and saved many lives that would have been lost by daily catheterization.

Suprapubic prostatectomy, because of the radicalness of the procedure as compared with the time-honored methods, had a permitted applicability only to extreme cases, gave a large mortality and hence a limited use. Improvements in anesthesia, greater confidence of surgeons, skillfulness and rapidity of technic have rapidly pushed the catheter aside and justly and happily eliminated it as a useful and wise instrument in the treatment of this disease.

It is argued by some that there are cases too old and too feeble to endure the shock of so radical an operation, but a consideration of the

results of experienced operators has demonstrated this enfeeblement and weakness has often been brought about by the very instrument recommended for use in this particular disease.

I once heard the question asked, when the danger came to the patient in prostatic hypertrophy, and I answer it in my own mind, when catheter life begins. What practitioner of many years' experience has not observed the distressing and tormenting crises of cystitis periodically in store to his every case of daily catheterization.

This benefactor when first used not only fails in relief at a given time but produces pain and suffering and unhappily renders the case more unfavorable for radical measures by the production of an infected bladder, ureter or kidney.

While a digest of the literature on this subject shows equally good results to have been obtained in the hands of skilled surgeons by the various methods of attack, yet from an anatomic standpoint the perineal method is the logical one.

Until the last two years the perineal route has been favored by the majority of operators; however, the unsatisfactory end-results in many of the perineal cases have stimulated some surgeons to a more frequent trial of the suprapubic operation. Some operators this early claim better results from this route.

The question is no longer what is possible in the hands of the specially skilled, but what method considered from an anatomic standpoint will in the hands of the average surgeon most certainly, safely, completely and permanently relieve the obstruction dysuria that old age falls heir to.

In the present day advancement of prostatic surgery it is impossible to overstate the magnitude of the benefits which direct surgical attack now offers; especially if we bear in mind the frequency of the malady, the suffering and disability imposed by it and the certain disastrous ending to its palliation by catheterization.

I would not be understood as exaggerating the perils of catheterization which eventually sooner or later comes to every case.

It is granted that in many instances the habitual use of the catheter may be tolerated for long periods of time, first by a strict adherence to the laws of asepsis, and second by virtue of a special individual immunity against bladder infection; but even in the most resistant of individuals, cystitis sooner or later develops with its pain and suffering.

Further, these catheter subjects are prone to attacks of prostatic congestion of sufficient magnitude as to preclude the facile introduction of the catheter for a given period of time.

Shall the catheter never be recommended? Certainly as a temporary resort, but never, in the light of present day experience, as a measure of permanent use.

\* Read, by invitation, at the meeting of the First Councilor District, Langdon, Oct. 5, 1911.



In many instances it will be impracticable to resort to operative measures at the first appearance of serious obstructive symptoms by reason of the patient's disinclination or refusal to submit to an operation of such apparent magnitude, or the inconvenience it might occasion from a business standpoint to give up the time necessary for the performance of and recovery from a prostatectomy, provided the use of the catheter is found to be unattended with any trouble or discomfort. Nevertheless it is impossible to emphasize too strongly the great difference in the risks, both as regards danger to life and probable perfection of cure, of operations done early before the inevitable bladder, ureteral and kidney infections have developed, and of those which have to be done, as a last resort, in the presence of some or all of these conditions.

The diagnosis of prostatic dysuria having been made resulting either from enlargement of the gland or from fibrotic changes in its texture, are there any contra-indications for operative measures and indications for catheter life? Certainly the same conditions maintain here that are recognized by surgeons in general as contra-indicating to operations on other organs of the body and should be given the weight all the circumstances indicate. Great age, if with it catheterization be facile and comfortable, might properly be a reason for resort to the catheter during the brief period of life remaining rather than subject the patient to the special immediate hazards of operation.

Great age, however, is a relative term; many men are older at 70 than others at 80. Octogenarians in the absence of organic disease often bear operations well, if they are not subjected to too great loss of blood and are soon taken off the operating table.

Advanced kidney lesions are the most frequent conditions that may contra-indicate any serious operative procedure, requiring the surgeon to be content with the continual use of the catheter if practiced, or if not, with a rapidly executed perineal drainage under cocain.

Up to date I have operated on twenty-one cases, the first eight years and the last one six weeks ago. The perineal operation was done in nineteen of the cases and the suprapubic in two. All the patients were over 70 but two, and one was 84. Five cases were admitted with retention and extensive bladder distention. They were relieved by suprapubic aspiration with trocar and cannula and a small, soft catheter then threaded into cannula and left *in situ* from three to seven days for bladder drainage. In five cases it was not possible to enter the bladder with a sound, hence necessitating opening the prostatic urethra and entering the bladder without a guide.

In all the perineal cases the inverted Y incision was made through the skin and subcutaneous

fascia, and the prostate then exposed by blunt dissection with the finger.

Hemorrhage was pronounced in two cases and was controlled by sponges wrung out of boiling water. Three of the twenty-one cases terminated fatally. One was very feeble with pronounced arteriosclerosis and died from exhaustion at the end of the second week. Two had had a catheter life, one thirteen and the other ten years. In one of the fatal cases the bladder was distended with clotted blood and urine at time of operation. His death resulted from a continuation of the intravesical hemorrhage twenty-four hours after operation. In the third fatal case the suprapubic operation was done and death resulted from sepsis. The average stay in the hospital was fifteen days. The average time in bed, one week. The average time of postoperative drainage, nine days. The earliest time for urine to begin passing the natural channel, six days, and the latest, three weeks. The rectum was wounded in one case. Epididymitis complicated convalescence in five cases. Postoperative phosphatic deposit in tract of wound occurred in one case and deposit in wound and bladder in one case. In three cases urination was a necessity on an average every two hours on account of a small bladder. In all cases the anesthetic was well borne. The end-results were satisfactory in ten cases, fairly satisfactory in five, and partially in three of the eighteen recovered cases.

#### EMPHYEMA \*

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Empyema or purulent pleurisy is a term applied to a collection of pus in the pleural cavity. This condition may result from a penetrating wound of the chest caused by gunshot or stab or any other form of traumatism that might inflict a wound which subsequently becomes infected and thus results in suppuration.

A tuberculous cavity of the lung may ulcerate into the pleural cavity and set up a tuberculous empyema. This condition exists in a great many cases of advanced phthisis and rapidly brings on a fatal termination of the disease.

This condition is very often overlooked by the attending physician. The majority of cases of empyema develop during the course of, or in the convalescence from, the various infective diseases, scarlatina, pneumonia, measles, typhoid fever, whooping-cough or peritonitis.

Recently several cases of empyema caused by infection with the ray fungus of actinomycosis have been reported in the literature, and I have no doubt that it is much more prevalent than is generally supposed, as the diagnosis can only be

\* Read at the meeting of the First Councilor District, Langdon, Oct. 5, 1911.

made by the microscope, and the demonstration of the characteristic ray fungus.

Of all the causes of empyema, the pneumococcus is probably the most common, and it is my opinion that at least 50 per cent. of all cases is caused by that microorganism.

#### SYMPTOMS AND DIAGNOSIS

On inspection, if the disease is unilateral, the affected side will show more or less bulging, depending on the amount of effusion. Great effusion on either side will produce a lateral curvature of the spine with elevation of the scapula on the affected side. The spinal distortion can be demonstrated by applying a flexible straight-edge to the spines of the vertebra. Palpation will reveal well-marked immobility of the affected side. This is best detected by placing the palms of the hands, with the thumbs extended and touching, flatly on each side of the chest and carefully noting the difference in expansion during full inspiration. This test should be applied both front and back with the patient stripped and in the erect position. The tape line carefully used will show the difference in the expansion of the opposite sides.

If the effusion is on the right side, the liver dullness may extend below the ribs, and the apex impulse of the heart be displaced upward and to the left.

These symptoms are not constant and depend on the amount and the location of the effusion. If the empyema is on the left side, the apex impulse will be displaced to the right under the sternum where it will not be evident to inspection or palpation. If the exudate be extensive the heart-beat may be felt to the right of the sternum, in the third, fourth or fifth intercostal spaces and sometimes even with, or to the right of, the right nipple.

The intercostal spaces may be obliterated and if the effusion is very great, bulging may show. In my opinion this is the most misleading of all the signs of effusion that are given in the books, for many physicians depend too much on finding intercostal bulging, and in its absence overlook many cases of empyema that should have immediate attention. If this symptom is found, it confirms the diagnosis, but its absence does not mean that there is no empyema.

Palpation will bring out another very valuable sign; viz., lack of vocal fremitus in adults and older children, and lack of cry fremitus in small children. Percussion will reveal a dull and flat note over a collection of pus, varying from an almost imperceptible dullness to an absolute flatness.

This variation is due to the variable size of the effusion and the condition of the underlying lung. The percussion stroke should be lightly made to properly elicit the dullness, particularly in children and in adults when percussing an area where

the lung is overlaid by a thin layer of effusion. In this connection, I wish to call attention to the fact that in empyema, as in all other collections of pus, there is a tendency to accumulation in the most dependent portion of the cavity; in this case, behind the lung and next to the spine. Always examine the back part of the chest with great care in suspected cases of empyema.

In some cases this low and posterior accumulation of the exudate will float the lung upward and forward, causing an increased resonance when percussion is made over the upper and front part of the chest. Auscultation is of the least value of any of the methods of diagnosis, and I only mention it to emphasize its lack of reliability.

The temperature in a case of empyema is subject to very erratic variations, in the morning falling as low as 99 degrees, with an evening rise of 1 or 2 degrees.

As the accumulation of pus increases, the evening temperature will gradually, but not uniformly, increase to 101, 102 and sometimes to as high as 105 degrees accompanied with all the signs of septic infection. There is a very rapid pulse, profuse sweating and hectic flushing of one or both cheeks. There is dyspnea and a short, hacking, dry cough. Often there is a sharp stabbing pain in the side. The patient will generally complain of soreness of the affected side and will almost always lie on that side.

There may be epigastric pain due to infection of the diaphragmatic pleura. In young children there may be such well-marked brain symptoms as to lead the physician astray and cause him to totally overlook the pleuritic infection.

#### COMPLICATIONS

Endocarditis, pericarditis, peritonitis and supuration of the joints may follow empyema and occasionally meningitis. Gangrene of the lung and necrosis of the ribs are dangerous complications. Sudden death from a weakened heart sometimes takes place. Perforation of the lung and a bronchus is a very common sequel of a neglected empyema and many patients recover after a long and tedious illness.

A sudden perforation of the bronchus by a large empyema under great pressure may literally drown the patient with pus.

I have seen several cases recover after perforation of the bronchus, but all were cases in which the pus was circumscribed by adhesion and the empyema was rather small. One of these cases was caused by cholecystitis. Perforation of the chest wall may take place, generally on the lateral part of the chest.

After gaining exit from the chest the pus is apt to burrow downward and forward, following the course of the ribs, and pointing generally on the front of the chest wall, the so-called "empyema necessitatus." This condition may cause well-marked edema of the walls of the thorax and



abdomen. Contraction and deformity generally follow in case the evacuation of the pus has been spontaneous. Persistent fistulas lasting for years are a frequent result of "empyema necessitatus."

#### DIAGNOSIS

The diagnosis of empyema in the earlier stage is not always an easy matter. If after obtaining a complete history of the case and making a thorough physical examination with the patient stripped to the skin and in an erect position, we are not able to make a satisfactory diagnosis, we have in the aspirating needle, or small trocar, a surer and more positive test.

Locate the area of dullness as near as possible, wash the skin thoroughly with sterile soap and water followed by 60 per cent. alcohol and tincture of iodine. Sterilize a large hypodermic needle or, what I prefer, a large antitoxin needle with a flexible connection. Insert the needle in the lower margin of the sixth, seventh or eighth intercostal space as close to the center of the area of dullness as possible. Insert the needle one-half inch in a slightly upward direction and retract the piston of the syringe. If pus is drawn into the syringe it of course establishes the diagnosis beyond a doubt, although the failure of the needle to draw pus does not necessarily indicate that it is not there, as in some cases the pus is so thick that it will not flow through a needle of small caliber.

If the needle fails to bring pus it should be inserted again in another place. If no pus is found and the symptoms still persist, it is advisable to make an incision. A word of caution in regard to the use of the needle for diagnostic purposes: It should not come into direct contact with the rib, as this might cause enough leverage to break the needle during a fit of coughing or struggling on the part of the patient.

It is for this reason that I prefer the antitoxin needle with the flexible rubber connection. It might be well to wrap the needle with thread, so as to gauge the depth of the insertion.

#### TREATMENT

As an empyema is an accumulation of pus, it should be treated as any other abscess, viz., by an evacuation of the pus and thorough drainage of the cavity. Incision has been practiced from the earliest period of medicine. Hippocrates states in one of his aphorisms that when empyema is treated by cautery or incision, if pure and white pus flows from the wound the patients recover, but if it is mixed with blood, slimy and fetid, they die. It is indeed strange, how so sound a surgical practice should have fallen into disrepute, and have been supplanted by the unsurgical and make-shift operation of aspiration. It is another illustration of the tendency to follow fads. While free incision with the drainage tube will result favorably in many cases, it is open to the objection that as the chest wall retracts there

is a great tendency to closure of the wound with pinching of the drainage tube between the ribs, thus interfering with perfect drainage. And should the tube be displaced it will be very difficult or impossible to replace it without another operation.

Aspiration, so popular a few years ago, has lately fallen into well-merited disfavor with progressive practitioners, for while it may remove part of the pus it can never completely evacuate the cavity, and of course drainage is impossible after this operation.

The operation of excision of one or more ribs, and the insertion of drainage tubes of large caliber is the best means of effecting a permanent cure of empyema, and is so easy of performance and is followed by such good results that it should be performed in a majority of cases. Either a general or local anesthetic can be used, depending on the age and condition of the patient.

After the skin has been properly prepared, make a longitudinal incision 3 or 4 inches long over the sixth, seventh or eighth rib on the posterior axillary line. On the right side it is well not to go below the seventh rib on account of the arch of the liver. On the left side the eighth rib may be removed with safety, in most cases. After the rib is exposed, with a firm, steady stroke split the periosteum 2 or 3 inches. Make a transverse cut across the rib at each end of the periosteal incision. With the elevator peel the periosteum from the rib, carefully separating it from the bone on the inner side. Introduce a bone-cutting forceps or the hooked blade of a pair of rib shears, slide the instrument back to the posterior part of the piece to be removed, see that the rib is free from the periosteum and sever the bone.

If bone forceps are used, seize the rib with holding forceps or finger, and advance the cutting forceps to the front and cut through the rib again, removing  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches of the rib, depending on the size and age of the patient.

If the rib shears are used it will not be necessary to seize the rib with the holding forceps, as the hook blade will remain behind the bone and will only need to be slipped behind the rib to the point of section. Make a small incision through the periosteum and parietal pleura, thus avoiding the intercostal vessels. Allow the pus to escape slowly at first to permit the heart to accommodate itself to the change in pressure. After a considerable quantity of pus has been evacuated, enlarge the opening sufficiently to allow the introduction of the finger for exploration of the cavity. If the pus sac extends to the front of the chest, it is good practice in some cases to introduce a long pair of dressing forceps toward the front of the chest, push the point of the forceps between the ribs anteriorly, cut down on the point of the forceps and draw through a double drainage tube of from three-eighths to one-half inch in diam-

eter. Secure each end of the tube with a safety-pin and close the skin incision with a silkworm-gut suture. Apply a large absorbent dressing retained by a swathe of jacket.

In case the abscess cavity does not extend far to the front, but dips inward toward the base of the lung, it is better to insert the tubes directly into the cavity and retain them with a silkworm-gut suture passed through the skin and tubes. In case perforation of the bronchus has taken place before operation, it is dangerous to operate under a general anesthetic with the patient in a supine position, as there is danger of suffocation by pus flowing into the trachea. In these cases it is better to use a local anesthetic or operate with the patient in a sitting or Fowler position.

After the operation in these cases it is a good plan to place the patient in bed in the Fowler position with the body inclined to the affected side for a few days to encourage drainage through the tubes and to relieve the perforated bronchus. In double empyema, operate on one side and wait a few days before opening the other. In case the empyema is the result of a penetrating wound, especially a gunshot, the external opening should be made large enough to permit exploration of the cavity by the finger of the surgeon, and search should be made for any foreign body, such as pieces of cloth or splintered ribs. The dressings should be changed as often as they become badly soiled, which will be quite often during the first few days.

The drainage tubes should be left in place until it is certain that the pus cavity has thoroughly contracted. It is better to leave them a few days longer than necessary than to remove them too soon, as this might be followed by a new accumulation of pus which might necessitate a second operation. As soon as the chest wall begins to contract, the patient should begin regular and systematic lung exercise for the purpose of expanding the contracted lung and preventing deformity of the chest; this may consist of making a full inspiration and then expelling the breath through a tube of small caliber, such as a pipe stem. Children can derive a great benefit from blowing soap bubbles. Or two bottles may be arranged connected by tubes so that the patient can blow water from one to the other.

These exercises should be practiced several times daily. As soon as possible after the operation the patient should be taken into the open air and encouraged to spend as many hours in the sunshine as possible. In short, treat them as you would a case of incipient tuberculosis.

A final word as to the treatment of actinomycosis empyema: After operation, if the ray-fungus is suspected and the diagnosis is confirmed by a microscopic examination, we should place the patient on specific treatment. Veterinary surgeons have taught us that in the use of large doses of potassium iodid we have a specific

for actinomycosis. The drug should be administered in 60 to 90 grain doses three times a day for three day periods, followed by three day intermissions. This treatment should be continued for six or eight weeks.

#### REPORT OF A CASE OF PULMONARY TUBERCULOSIS WITH CAVITY FORMATION IN AN INFANT AGED THREE MONTHS \*

E. P. BUDDY, M.D.

ST. LOUIS

My object in reporting this case is not because of its unusual symptoms, rarity of occurrence or diagnostic difficulties, but because of its classical simplicity in fulfilling all the requirements of a typical case as regards exposure, mode of infection, symptoms, signs, rapidity of generalization, laboratory confirmation and autopsy findings.

Oct. 1, 1911, baby M., 3 months old, female, normal birth, breast fed, flourishing condition until three days ago when constipation, paleness and vomiting began in the evening.

Family history: Father living at home, tuberculous. Mother in apparent good health. Two brothers and one sister in fair health.

*Examination.*—Abdomen negative. Lungs, no findings save slight dulness and harsh expiration between left scapula and spine. Throat clean. Cervical glands palpable. Temperature, axilla 100 F.

Advice: Mother instructed to take temperature and record it. Cautioned regarding personal care and probability of tuberculous condition.

Oct. 13, 1911: Has been running temperatures between 99 and 101 F. Cough began 10 days ago, severe at times. Losing weight, listless, pale.

*Examination.*—Shows inspiratory fine moist râles over left third intercostal space, parasternal line. Left posterior between scapula and spine, shows inspiratory râles and blowing gurgling expiration. Throat clean. Cough occurs in paroxysms, relieved when material is expelled from trachea and swallowed. Cervical glands more prominent on left as are left axillary. Following coughing spell baby was made to vomit. Vomitus examined showing few scattered tubercle bacilli, leukocytes, mucous cells and fat globules.

*Diagnosis.*—Pulmonary tuberculosis involving root of left lung with possible cavity.

Prognosis unfavorable.

Von Pirquet right forearm.

Oct. 16, 1911. Rapid declining. Drowsiness. Indifferent about nursing. Cough worse. Von Pirquet negative. Left base shows inspiratory râles with areas of roughened expiration and harsh coughing sounds. Area between spine and scapula presents same findings as above.

Vomitus again examined as collected by mother in the morning. Tubercle bacilli were found in abundance. Blood smear negative. Leukocytes seem prominent. Mother's breasts examined and smears made from milk in each, no bacteria found.

October 19. Râles over left root and both bases. Cough worse with straining in effort to clear trachea. Temperature daily average 100-102 F.

October 23. Râles persist over left root anterior and posterior with increasing diffuseness over both bases and areas of dulness and harsh expiration.

\* Read before the St. Louis Medical Society, Dec. 2, 1911.



Right anterior third interspace shows dulness and tubular breathing. Losing rapidly. Diarrhea and vomiting. Temperature 103, respiration 50, pulse 160.

Diagnosis now of tuberculous bronchopneumonia. October 26, 5 p. m., baby died.

October 27, 7 a. m., autopsy. No rigor mortis. Discoloration of hands and buttocks. Increased resistance right chest. Pleural cavity no fluid. Discoloration over right anterior where pleura was adherent.

Lungs show firmness of right middle lobe with areas of consolidation, caseation and some breaking down toward hilus. Bronchi filled with purulent exudate. Left root shows abscess cavity size of pigeon egg surrounded by caseated area. Other smaller excavations along vertebral border, caseous nodules scattered throughout both lungs. Apices macroscopically free. The paratracheal glands formed chains from sternocleido junction to bifurcation where on left they were matted together. Caseation was marked in these glands and at root of lung they were broken down. Heart and great vessels negative. Mediastinal glands not apparently involved. Abdominal viscera negative, save spleen which was large and soft.

*Anatomical Diagnosis.*—Tuberculous bronchopneumonia (with caseation and cavities). Adhesive pleurisy. Tuberculous adenitis.

The classical findings are:

1. Exposure: Father tuberculous (and did not know it for some weeks after birth of child).

2. Mode of entry: Probably through bronchial glands from adenoid tissue of nasopharynx or tonsils.

3. Signs: Typical of a beginning process at root of left lung to rapid and extensive involvement.

4. Tubercle bacilli found with ease and in such abundance.

5. Autopsy findings readily explaining physical signs and revealing the destructive process. The cavity formation which is not common in such a rapid process in one so young.

Grand and Wyoming.

#### LIME-CRUSTED SILK SUTURES IN THE BLADDER—RADIOGRAPHIC DIAGNOSTIC REPORT

E. H. SKINNER, M.D.  
KANSAS CITY, MO.

CASE No. 488.—E. H., aged 28; American; laborer. Admitted to the Kansas City General Hospital May 17, 1911, for a double inguinal hernia. Right hernio-ectomy and repair of accidental wound of bladder wall, May 18, 1911. The hernio-ectomy wound closed uneventfully. The patient, however, complained of painful and frequent micturition from about the fourth day after operation.

On June 1, 1911, the surgical services changed attending surgeons and the case was immediately

referred to the radiologic laboratory for possible stone in the bladder. The patient complained of constant pain and discomfort at the neck of the bladder; micturition was frequent and sometimes interrupted.

The x-ray negative revealed a shadow of the density of calcareous material near the neck of the bladder. This shadow was not typical of stone in the bladder as there was a translucent area in the center of the calcareous ringed shadow. It suggested something like a ring or shell. After a second thorough cleansing of the bladder and rectum the patient was returned for a second x-ray exposure on June 15, 1911. Similar



shadows persisted and a diagnosis of an unknown foreign substance in the bladder was returned to the attending surgeon, Dr. J. P. Henderson. A perineal incision was made by Dr. Henderson and a coil of silk suture material crusted with lime-salts was removed from the bladder.

The wound of the bladder-wall during the hernio-ectomy had been sutured with heavy silk which had sloughed and in three weeks' time had amassed sufficient urinary salts to cast a demonstrable x-ray shadow. The crescentic x-ray shadows in the bladder were thus explained. The patient made an uneventful recovery.

1018-1020 Rialto Building.

# THE JOURNAL

OF THE

## Missouri State Medical Association

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 Address all Communications to 3525 Pine Street, St. Louis, Mo.
 

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MARCH, 1912

### EDITORIALS

#### LIABILITY INSURANCE FOR PHYSICIANS PROHIBITED

Every now and then one is jarred out of the humdrum rut of his daily pursuit by the noisy babble of some watchdog of the public weal who has made the shocking discovery that certain practices long regarded as proper safeguards sanctioned by legal statute are in reality subversive of the public welfare. So it has happened that the medical profession of the state was recently lifted off its feet, so to speak, and knocked into smithereens by the ruling of the state superintendent of insurance, prohibiting insurance companies from writing insurance indemnifying physicians against damages for malpractice. Incidentally the superintendent ordered that the same prohibition extend to dentists, druggists and owners and drivers of automobiles. Later on, we are informed, the order as it affected autoists was modified so as to permit the insurance of careful and sober drivers and owners of automobiles; but against those undesirable citizens, the doctors, dentists and druggists, the order stands firm and immovable, there being, of course, no careful and sober representatives of these professions in Imperial Missouri.

It is the duty of the superintendent of insurance to see that the insurance laws of the state are obeyed and as a profession we can have no quarrel with the ruling; although we are of the opinion that the superintendent has overstepped his authority by reading into the law an interpretation not intended by the legislature that created the statute. The settlement of this question is a matter for the insurance companies and the superintendent of insurance to fight out, not one for the medical profession to meddle with. We got along very well before the day of indemnity insurance and we believe the profession will find no difficulty in pursuing its usual habit of giving the best and most careful attention to the sick and afflicted that hard study, close application and intense attention to the progress of medicine can bestow, the accusatory opinion of the insurance superintendent to the contrary notwithstanding.

The press dispatches announcing the order stated that the superintendent considered it against public policy to allow physicians to be insured against payment of damages for their own unskillfulness, because such protective insurance rendered the physician careless and indifferent of the result of his treatment of patients; an interpretation of the underlying causes that led to the establishment of liability insurance for physicians that is entirely novel and unique. It would therefore boot nothing to point out to the insurance superintendent that over 70 per cent. of malpractice suits against physicians are nothing less than attempts at blackmail and that 90 per cent. of all malpractice suits are without merit; also it is a waste of words to offer the information that only reputable and conscientious physicians are acceptable risks; these are facts well known in insurance circles and quite as well known in the legal profession, of which the superintendent is a distinguished representative.

This sudden interest in the public weal springs, it would seem, not from any objection to defense insurance *per se* but from the frightful discovery that the policies held by physicians do not permit the insurance companies to settle a suit without the consent of the physician; therefore the cause must be fought through all the courts — if it has sticking qualities in it, a rare incident indeed in this class of litigation. What the policy would be worth to the physician if settlement were optional with the company may be represented by a large, round cipher.

Immediately after the ruling was made public the President of the Association sent a protest to the insurance superintendent and one or two county societies protested against the order. In response to the President's protest the superintendent acknowledged that 90 per cent. of malpractice suits against physicians were without merit but reiterated his opinion that it was wrong in principle to permit insurance companies to write this kind of liability insurance for physicians.

There is nothing further that the medical profession can do or should attempt to do. For the present the ruling stands as law and no more defense insurance will be written for physicians unless the order is rescinded or declared invalid by the courts.

In the meantime we suggest that the members prepare to attend the annual meeting at Sedalia and through the reading and discussion of articles descriptive of the various diseases that afflict mankind, endeavor to discover the means of curing and preventing these abnormalities, with as much indifference, carelessness and recklessness as their training, study and the length of time their policies still have to run, will permit.



## EXTENSION OF THE DEFENSE BENEFITS

The ruling of the state superintendent of insurance prohibiting companies from writing defense insurance for physicians has caused a great deal of comment among members of the Association both as to the legality of the order and as to what effect it will have on the status of our own defense measure. We are advised that the ruling cannot affect our Association and the members therefore will continue to receive the assistance of the Association in all malpractice suits of a civil character.

The uncertainty of the legal status of insurance companies in this respect has revived the agitation among the members for an extension of the defense benefit of membership in the Association. It seems to be an opportune time for considering this question seriously with the view of enlarging the fund and increasing the benefits.

It has been demonstrated to the satisfaction of all who have been assisted by the defense committee that the Association gives better protection against malpractice suits than is offered by commercial insurance companies, in spite of the very modest sum at the disposal of the defense committee. We urge all members therefore to give serious thought to the resolution introduced in the House of Delegates at the last annual meeting by the Jackson County Medical Society, which we present on another page.<sup>1</sup> This resolution was not adopted at the time, its consideration being postponed to a future meeting.

We believe the Association should adopt some comprehensive plan for the full and complete protection of the members. We must stand together in this field as in other aims and objects of the Association for it is clear that in this matter of defense against malpractice suits the most important service in the physician's defense comes from his confrères — the members of his own organization. We urge the members to discuss this subject at their meetings and request them to express their views in letters to the secretary; not for publication but for the purpose of informing the House of Delegates at the Sedalia meeting of the general sentiment on this important question.

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## PRELIMINARY PROGRAM FOR THE FIFTY-FIFTH ANNUAL MEET- ING, SEDALIA, MAY 21, 22 AND 23, 1912

On another page we publish the preliminary program as far as it has been prepared for the next annual meeting. Other papers will be added to this list and appear in the April issue, and the entire program, complete for the annual meeting,

will appear in the May issue. Members who desire to present papers should communicate with the program committee at once; their names and addresses will be found on page VIII in the advertising department.

The program committee is specially anxious to present a pathologic exhibit at the Sedalia meeting and now has a number of contributions for this exhibit. Any member who desires to add to this collection should correspond with Dr. S. G. Kelly, Sedalia, giving information of the character of the exhibit he wishes to make and the amount of space required.

It is well to remind members at this time that only those whose annual assessment has been paid by their county societies will be eligible to participate in the proceedings of the annual meeting. The fiscal year of the Association ends December 31 and dues and assessments are payable on January 1. Members who have not yet paid their county society dues are urged to attend to the matter at once so that their societies may be fully represented at the annual meeting.

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## COURT UPHOLDS COMPULSORY VAC- CINATION OF SCHOOL CHILDREN

A St. Louis physician recently brought suit to restrain the school board from enforcing its compulsory vaccination rule and compel the reinstatement of his two unvaccinated children in the public schools. Judge Muench, who heard the argument, gave a written opinion in the case; he denied the injunction and upheld the rule of the board. Judge Muench said the argument that vaccination was not always successful and often produced tetanus was weak and could not be relied on as grounds for the rejection of the practice. To quote from the opinion: "If the city of St. Louis now enjoys comparative immunity from the plague of small-pox that happy condition may not illogically be attributed to the consistent enforcement of rules requiring universal vaccination, while a relaxation in the rigorous application of the rules would soon result in the existence of a large body of children who, through lack of immunity, would form a distinctly dangerous field for the development and spread of this dread disease." The opinion further says it is the general and world-wide opinion that external vaccination is effective, and holds that the board of education must adopt regulations which are best suited to secure the greatest good to the greatest number.

This opinion should lend strength to school boards in other cities in the state and encourage the enforcement of the compulsory vaccination rule in all schools.

1. Page 364.

## LET THE NAME TELL

The sentiment is growing that foods and medicines—and for that matter all other commodities—when offered for sale shall bear a declaration of their identity and quality. "Let the label tell" promises to be the watchword for future legislation regulating the sale of products of all kinds. While such a requirement will be an effective means of protecting the public against inferior, adulterated and dishonest products, it would fail to furnish the desired protection in so far as concerns medicinal preparations which are prescribed by physicians. This for the reason that physicians rarely see the medicines which they use. It would be most desirable could a law be enacted requiring that mixtures of known drugs be given names which indicate their potent constituents. "Let the name tell" would be a just requirement for all such proprietary preparations. This principle has been recognized by the Council on Pharmacy and Chemistry which requires that in the case of pharmaceutical preparations and mixtures the name must be so framed as to indicate the potent constituents. The importance of this requirement is well shown in the case of the proprietary acetanilid mixture "Phenalgin" (*Jour. A. M. A.*, Jan. 27, 1912, p. 293). Although a report of the Council showed this proprietary to be a mixture of acetanilid 57 parts, sodium bicarbonate 29 parts and ammonium carbonate 10 parts and, although the food and drugs act has forced the proprietors of the product to declare its acetanilid content on the label, physicians apparently continue to believe that it is devoid of those untoward effects which all acetanilid preparations must possess. That the profession is being taken in by the false claims is shown by the fact that the product, six years after the exposure, is still on the market and by the fact that medical journals still carry the advertisements for it.

## COUNTY HOSPITALS FOR TUBERCULOSIS

In view of the fact that the state has enacted a law enabling a county or a group of counties cooperating to provide means for the care of tuberculosis patients in all stages, we may reasonably expect some counties to undertake this work in the near future.

St. Louis and St. Louis County, which are already cooperating in the care of the sick, will have to provide further facilities for tuberculous patients, and we understand the subject is now under consideration. Is it not possible that St. Louis and St. Louis County, independently or cooperating with the adjacent counties, St. Charles, Franklin and Jefferson, may take the initiative in this new and important work?

Other states, notably New York, Michigan and Massachusetts, are doing much for the educational and medical care of their tuberculosis cases so important in a prophylactic way for the community.

Our state sanatorium at Mt. Vernon, while doing all that it can, is quite inadequate for the large number of cases needing care; furthermore, the state institution is restricted to the care of incipient cases; besides, many patients could be induced by the local physician of different sections to avail themselves of well-ordered accommodations and well-directed care near at hand, who hesitate to go long distances from their homes and friends. People are learning that sanatorium treatment for tuberculous diseases can accomplish much by way of relief and cure, and more frequently patients are asking where they should or can go for sanatorium treatment.

The fact that the state has already provided a way by which counties can care for their own patients of this class emphasizes the necessity. The accommodations required need not be elaborate, nor at first on a large scale. The main features are a suitable location as regards air and light and such hygienic and sanitary conditions as a simple inexpensive building, series of buildings or even tent houses may afford. It is hoped that in the near future some county or counties will undertake this work in earnest, and as St. Louis is contemplating something along this line we hope that it will soon be an accomplished fact.

## EDITORIAL NOTES

THE North Central Branch of the American Urological Association held its annual session in St. Louis February 7, 8, 9. Much of the time was spent in clinical work at the various institutions in the city. A banquet was tendered the Association by the St. Louis members.

A SUIT for \$200,000 has been filed against the members of the state board of health by the St. Louis College of Physicians and Surgeons, based on the allegation that the board had maliciously and without cause stricken the college from the list of accredited medical schools in the state.

CONCERNING free clinics at the city hospital in St. Louis, a movement that has been under consideration ever since the reorganization of the hospital system, the *St. Louis Republic* says:

A free clinic at the City Hospital would, like the quality of mercy, benefit alike those who gave and those who took. Germany and Austria are far ahead of the United States in matters touching public health. This is not simply because of enlightened sanitary policies. It is because the free clinics of those realms have educated the poorest classes of the people in the advan-



tage of special treatment for special diseases. The humblest German peasant can have the best surgical skill of the Empire in his time of need—and he knows it. It is the free clinics of cities like Berlin and Leipzig that have brought about this result.

It is indeed regrettable that the people and the medical profession are denied the benefits that would accrue from clinical study of the large variety of conditions that are treated annually in the city hospital at St. Louis.

SINCE January 1 the following articles have been accepted for inclusion with New and Non-official Remedies:

Lactic Bacillary Tablets, Fairchild Bros. & Foster.

Salvarsan, Victor Koechl & Co.

Neisser-Bacterin Mixed, H. K. Mulford Co.

Pneumo-Bacterin Mixed, H. K. Mulford Co.

Scarlatina Bacterin, H. K. Mulford Co.

Typho-Bacterin Mixed, H. K. Mulford Co.

Rabies Vaccine, H. K. Mulford Co.

Widal Test—Borden's Modification, H. K. Mulford Co.

Von Pirquet Test for Tuberculosis, H. K. Mulford Co.

Bass Test for Typhoid Fever, H. K. Mulford Co.

Gynoval, Farbenfabriken of Elberfeld Co.

#### RECOMMENDATIONS OF JACKSON COUNTY MEDICAL SOCIETY TO THE HOUSE OF DELEGATES OF 1911 MEETING

Below we reprint the resolutions of the Jackson County Medical Society introduced in the House of Delegates at the 1911 meeting, recommending an increase in the dues in order to enlarge the powers and benefits of the defense fund. The resolution was not adopted. It seems now very proper to renew these recommendations and we ask the members to give the subject their serious consideration. We suggest that the dues be increased to \$8 instead of \$4 for we know what can be accomplished with an adequate fund for the defense of members. The recommendations follow:

#### RECOMMENDATIONS BY THE DELEGATES OF THE JACKSON COUNTY MEDICAL SOCIETY TO THE HOUSE OF DELEGATES OF THE MISSOURI STATE MEDICAL ASSOCIATION.

We recommend that the constitution of the Missouri State Medical Association, and especially the by-law providing defense against malpractice suits, which was adopted in May, 1909, be amended in order that the powers of the Defense Committee of the State Association may be enlarged and benefits extended to the individual members may be more comprehensive in their scope, and that a plan for medical defense be worked out along the following suggestions:

The dues of the Association should be increased from two to four dollars a year. Of this amount, the sum

of six thousand dollars annually shall be apportioned to a legal defense fund.

This committee should be composed of three members, whose terms should expire in one, two, and three years from the time of appointment, thus making a vacancy of but one member each year.

This committee should have control of all claims or suits for civil malpractice instituted against any member of the association.

The member, immediately upon having a claim presented to him for damages arising out of civil malpractice, or immediately upon being served with summons in a suit for civil malpractice, shall forward to the Defense Committee of the State Association a copy of the claim for damages, or with a copy of summons and original petition, if the suit has been instituted, together with a full detailed statement of all the facts relative to the cause in controversy.

The Defense Committee shall thereupon take the matter up with local counsel, in whose selection the member sued or threatened with suit shall have a voice.

The defense shall be conducted by the legal counsel of the defense committee, together with the local counsel selected as above, and all expenses in any way connected with this defense shall be paid by the State Association out of the fund apportionment to the Defense Committee.

A member shall be entitled to this defense until the matter has been finally disposed of in a court of last resort.

We further recommend that as soon as this surplus sum shall consist of twenty-five thousand dollars or more, that all judgments rendered against any member of this association, if confirmed by a court of last resort, be paid by the Association.

The defense above specified refers only to suits for civil malpractice, and is not to be construed to apply to criminal prosecutions or prosecutions which are criminal in their nature.

F. J. IUEN,  
H. E. PEARSE,  
A. W. MCALESTER, JR.,  
Committee.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending towards honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.

### RELIABLE MEDICINES

NEISSER BACTERIN MIXED, a gonococcus vaccine, each c.c. being said to contain approximately 100 million each of killed staphylococcus (aureus, albus and citreus) and 59 million each of streptococci, *B. coli*, *B. pseudo-diphtheriae* and gonococci. It is marketed in packages of four 1 c.c. ampules. Also marketed in vials of 20 c.c. and in 4 syringes, Syringe A being of the composition mentioned above and constituting the

initial dose, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**PNEUMO-BACTERIN MIXED**, a pneumococcus vaccine, each c.c. being said to contain 50 million killed pneumococci, 25 million killed streptococci and 50 million killed staphylococci. Also marketed in vials of 20 c.c. and in packages of 4 syringes, Syringe A being of the composition mentioned above and constituting the initial dose, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**SCARLATINA-BACTERIN** (Scarlet Fever Vaccine), a streptococcus vaccine, consisting of a suspension of killed streptococci obtained from scarlet fever cases. Marketed in packages of 4 syringes, Syringe A containing 50 million killed streptococci, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amounts of bacteria contained in Syringe A. It is also marketed for immunizing purposes in packages containing 3 doses ready for use and sufficient to immunize one person. Also in 20 c.c. vials, sufficient for immunizing 5 persons. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**TYPHO-BACTERIN IMMUNIZING**, a typhoid vaccine, marketed in packages containing 3 syringes; the contents to be injected subcutaneously at intervals of ten days. Hospital-size packages contain 30 ampules, in sets of three. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**STAPHYLO-BACTERIN MIXED**, a staphylococcus vaccine, composed of a suspension, each c.c. containing 25 million killed streptococci, 100 million killed staphylococci and 50 million killed *B. coli*. It is marketed in packages of four 1 c.c. ampules. Also in 20 c.c. vials and in packages of 4 syringes, Syringe A being of the composition given above, while Syringes B, C and D contain, respectively, 2, 4 and 8 times the amount of bacteria contained in Syringe A. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**VON PIRQUET TEST FOR TUBERCULOSIS** consists of old tuberculin in capillary tubes. Each tube contains old tuberculin sufficient for one test. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**RABIES VACCINE** is an antirabic vaccine prepared according to the method of Pasteur. It is a complete treatment, consisting of 25 doses, to be administered during 21 days. Each day's injection is shipped in a Caloris vacuum bottle. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**BASS TEST FOR TYPHOID FEVER** is a modification of the method of Widal consisting of a suspension or emulsion of killed typhoid bacilli, a glass slide on which to mix the emulsion with suspected blood, a slide with dried smear of infected blood, a needle for pricking ear or finger to obtain suspected blood from the patient and a pipette for dropping typhoid emulsion and water on slide, previous to mixing with sus-

pected blood. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

**MULFORD'S WIDAL TEST OUTFIT** is a means of applying Borden's modification of Widal's test. In this test the serum of the blood is mixed with salt solution and then with a suspension of killed typhoid bacilli so as to bring the dilution up to 1 to 50. The positive reaction is determined by noting that the clumps of bacteria sink to the bottom of the test tube and leave a limpid, clear fluid above a small, white, flocculent mass of agglutinated bacilli. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, Feb. 3, 1912, p. 343).

## REFORM IN MEDICINES

**THE PROPOSED ROYAL COMMISSION ON QUACKERY.**—There seems to be little doubt that the propaganda against "patent medicines" in Great Britain has reached the place where a royal commission will be appointed to investigate the nostrum evil. While the recommendation for the appointment of such a commission has been fathered by the British medical profession it is probable that if the investigation is broad and impartial, the medical profession of Great Britain will not be held entirely blameless for the very evil it deplors. This for the reason that, although willing to condemn the use of secret medicines by the public, it has not kept its own skirts clean as is shown by the free scope which nostrum advertising enjoys in first class British medical journals. The British medical profession will find difficulty in justifying its position on the nostrum question. Its past attitude will do much to offset the good that such a royal commission might otherwise accomplish (*Jour. A. M. A.*, Feb. 3, 1912, p. 349).

**DUFFY'S MALT WHISKEY ADVERTISEMENTS.**—Certain newspapers are carrying advertisements which claim "Duffy's Pure Malt Whiskey Cures Consumption," "The greatest known heart tonic," "It stimulates the blood," "Cures asthma."

What do you think of newspapers that will sell advertising space to such a fraud as the Duffy Malt Whiskey concern? What do you think of medical journals that will carry advertisements for the same fraud? The following carry Duffy's Malt Whiskey advertisements: *Buffalo Medical Journal*, *Massachusetts Medical Journal*, *Medical Standard*, *Medical Summary* and *Medical Brief*. Most of these are mere advertising sheets, the *Buffalo Medical Journal* being a notable exception, which exist because physicians patronize them. As to the public one medical journal looks much like any other medical journal the profession finds it difficult to persuade law-makers that its fight against nostrums is in the public interest. (*Jour. A. M. A.*, Feb. 3, 1912, p. 350).

**HONORS ARE EVEN.**—Among those who shared in the honors distributed on the occasion of the Durbar ceremony were two British "patent medicine" exploiters, who have made their millions from the gullible sick, and who have now received the order of knighthood from King George. This reminds one of that genial personage whose relationship to the Duffy's



Malt Whiskey outfit and the canning company that sold short-weight products has often been the subject of comment and whom a free people elected to the vice-presidency of the United States (*Jour. A. M. A.*, Feb. 3, 1912, p. 351).

OLEUM TELESPHOROS.—Albert P. Mathews, Ph.D., professor of physiologic chemistry in the University of Chicago, discusses the much overworked scheme on the part of manufacturers of proprietary remedies of investing very ordinary substances with most extraordinary properties—and names. He points out that this proprietary, which is recommended for use in abdominal surgery for the purpose of preventing adhesions, appears to be “oleo oil” or “oleomargarine”. Sarcastically he suggests: “The statement that, being derived from the omentum and appendices epiploicæ, it is hence ‘no more than natural that one of its greatest spheres of usefulness should develop in its application to abdominal surgery,’ will carry great weight with those who believe that kidney beans are a panacea for kidney disease and that lunacy is due to the moon.” (*Jour. A. M. A.*, Feb. 3, 1912, p. 363).

PETROGEN AND CREOSOTE PETROGEN.—Petrogen is essentially a mixture of liquid petrolatum and soap liniment and does not widely differ from the preparation petrolatum saponatum liquidum (petrox, liquid petroxolin) N. F. As an improvement on creosote petrogen the following formula has been proposed for creosote petroxolin for the National Formulary: Creosote 20 gm., oleic acid 5 gm. and liquid petroxolin 75 gm. (*Jour. A. M. A.*, Feb. 3, 1912, p. 365).

PUBLICATIONS DERIVING REVENUE BY PROMOTION OF FAKERY.—Those publications which derive their revenue principally from the promotion of fakery use various tactics to discredit those forces engaged in exposing worthless or fraudulent nostrums. In an editorial the *Druggist's Circular*, a consistent champion of honest pharmacy, notes that while many journals believe it wiser to say nothing in the hope that the storm will blow over, others cannot keep their equanimity and attempt in various ways to defend the nostrum promoters. Readers, generally, however, have grown much wiser regarding many things than they were a few years ago, and as just intimated, are becoming more and more able to discern the whereabouts and the nature of the Ethiopian in the nostrum woodpile. The number of people that may be fooled all the time is continually growing smaller (*Druggist's Circular*, Jan. 1912, p. 4).

WHICH WILL BE NEXT?—With the January issue, *Surgery, Gynecology and Obstetrics* advertises no pharmaceutical preparation that has not been approved by the Council on Pharmacy and Chemistry. Three independent journals now support the Council in this way, namely, *Surgery, Gynecology and Obstetrics*, *Southern Medical Journal* and the *Cleveland Medical Journal*. Which will be next? (*Jour. A. M. A.*, Jan. 20, 1912, p. 200.)

THE J. B. L. CASCADE TREATMENT.—The J. B. L. (“Joy-Beauty-Life”) Cascade is a device sold by one Chas. A. Tyrrell, an eclectic physician of New York City, for the administration of rectal enemas. Tyrrell has improved—commercially—on the propaganda started many years ago by Wilford Hall who declared that all the ills of the flesh are due to the fact that people do not make a practice of flushing their colons. Tyrrell sells the appliance for giving these injections and claims that apoplexy, consumption, Bright's disease, syphilis and cancers “all have their origin in the colon” and that “Typhoid fever and appendicitis may positively be cured and absolutely prevented by the ‘J. B. L. Cascade’ treatment.” Tyrrell's treatment, which is said to cure everything, consists of his syringe and stick of soap and his “celebrated ‘J. B. L. Antiseptic Tonic’”. He also sells the “Ideal Sight Restorer” claimed to cure the refractive errors of the eye—nearsight, farsight, old sight and astigmatism—and also cataract, glaucoma, cross-eye and paralytic blindness (*Jour. A. M. A.*, Jan. 20, 1912, p. 213).

MERCOLIZED WAX.—“Mercolized Wax” belongs to the “prescription fake” type of nostrum. It is advertised “to remove the thin veil of dead cuticle and leave the skin dry, clear and beautiful.” Analysis showed it to be an ointment containing 10 per cent. of zinc oxid and 10 per cent. ammoniated mercury. (*Jour. A. M. A.*, Jan. 20, 1912, p. 218).

LIMITATIONS OF ORGANOTHERAPEUTICS.—The glands of internal secretion are assuming more and more importance in medicine. Attention is now being especially directed to the milder forms of hypo- and hyperactivity of these glands.

While organs of animals have been used in medicine for a long time we are but beginning to learn the conditions in which organotherapeutics promises to be of value. In discussing recent advances the *Journal A. M. A.* says: “The ability to do this in a few cases is due to recent experimental and accurate clinical work, for it is a striking fact that although organotherapeutics is one of the oldest and most wide-spread forms of therapy, not a single result of value was obtained until empiricism was replaced by rationalism.” From recorded observations it would seem, *a priori*, that cases of thyroid deficiency would offer a more promising field for organotherapeutics than would cases of parathyroid and suprarenal deficiency, and these in turn than cases of pancreas deficiency.

It is probable that “not many of the 250 or more preparations of organs of animals found on the market are creditable to modern medicine or to the manufacturers exploiting them. The lists of commercial preparations include such substances as liver, kidney, brain, spinal cord and salivary glands—organs for which there is no, or but very slight, evidence, that they form specific internal secretions—and various preparations of the “internal secretion” of the pancreas, although there is evidence that none of this secretion is retained, at least in an active form, in this gland.” (*Jour. A. M. A.*, Jan. 27, 1912, p. 278).

**PHENALGIN.**—"Phenalgin is a synthetic coal-tar product"—this claim was made some years ago when the profession took the manufacturer's claims at their face value. Then the Council on Pharmacy and Chemistry came into existence and in a report stated that Phenalgin consisted of acetanilid 57 parts, sodium bicarbonate 29 parts and ammonium carbonate 10 parts. To offset the report of the Council the manufacturers, the Etna Chemical Company, adopted the slogan "Phenalgin is just what we have always said it to be."

While the Food and Drugs Act required abandonment of the former claim that Phenalgin was a synthetic and an acknowledgment on the label that it contains acetanilid as its chief constituent, while the firm found it expedient to omit certain other claims from the label, in a general way the same claims are made for the product now that were made formerly. That is, although the Food and Drugs Act has forced a certain degree of truthfulness on the Phenalgin labels, the advertising matter is as fraudulent and as untruthful as ever it was.

On the cartons in which the bottles of Phenalgin came, it is stated that the product is "for dispensing purposes only." Yet, as a matter of fact, practically any layman can go to any drugstore and obtain this product, otherwise it would not be necessary to include with every bottle a circular naming the diseases for which this acetanilid mixture is supposed to be good and to have the name of the product and of the firm making it blown into the bottle! (*Jour. A. M. A.*, Jan. 27, 1912, p. 293.)

**FRAUDULENT PROPRIETARIES.**—What is a fraudulent proprietary medicine? A fraudulent medicine is one that is exploited under false assertions regarding either its composition, its therapeutic effects or both. Formerly false formulas were circulated with utter abandon and no therapeutic claim appeared too absurd. The exposures of the Council on Pharmacy and Chemistry and the enforcement of the Food and Drugs Act have made the declaration of false formulas a risky procedure and hence they have been abandoned altogether or are so worded as to be meaningless. As regards therapeutic claims there has been a slight tendency to abandon the "lie direct" for the "lie with circumstance," but in general the claims are well-nigh as fraudulent to-day as they were ten years ago. Phenalgin illustrates the type of proprietary humbug that is foisted on the medical profession under claims that are both false and vicious (*Jour. A. M. A.*, Jan. 27, 1912, p. 280).

**THE JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.**—With the object of furnishing a more direct and speedy means of communication between the American Pharmaceutical Association and its members, the association has established a monthly journal which is to be its official organ. The first number has just appeared. Like the "independent" medical journals, drug journals in general have found it expedient to withhold publicity of the Association's propaganda for honest medicine. This journal, it is expected, will

be the third drug journal that will help the propaganda (*Jour. A. M. A.*, Jan. 27, 1912, p. 282).

**BLIGHT AND THE NATURAID FAKE.**—In discussing the personnel of the National League for Medical Freedom the connection of Reynold E. Blight of Los Angeles, Cal., with the NaturaID Health Utilities Company was referred to. The reference was based on circulars sent broadcast by the NaturaID concern. From protests sent by Mr. Blight denying his connection with the concern it appears that, although living in the town in which this quack concern is located, he remained in ignorance of the misuse of his name until it was called to his attention by a journal published in the interest of a profession with which he is not connected and issued 2,000 miles from where he lives (*Jour. A. M. A.*, Jan. 27, 1912, p. 294).

**AYER'S CHERRY PECTORAL.**—In pointing out that "The Conspiracy of Silence," which formerly reigned over patent medicines now dominated proprietary nostrums, it was suggested that a death due to Ayer's Cherry Pectoral would not have been noted in newspapers. The J. C. Ayer Company objected to this statement because their Cherry Pectoral of to-day—"contains no anodyne whatever." The incident calls attention to the variability of composition of proprietaries, whether of the "patent medicine" or the "ethical" kind. Previous to 1905, Ayer's Cherry Pectoral contained morphin and alcohol. The firm having decided to publish its formula the composition was changed. Terpin hydrate was added, some of the drugs previously used were omitted and heroin was substituted for morphin. The alcohol was retained. Later the formula was again revised and the alcohol left out. Still later the formula was re-re-revised and the heroin left out. Formulas may come and formulas may go, but a nostrum goes on forever—or at least so long as the newspapers will carry its advertisements! If the composition of a "patent medicine" which is sold under an open formula should undergo such radical changes in a comparatively short time, what is happening in the case of those products whose composition has never been made public and whose manufacturers make no pretense of "playing fair" with the public? (*Jour. A. M. A.*, Jan. 27, 1912, p. 294).

**FORMAMINT.**—Formamint Tablets are widely advertised and extravagantly exploited to the laity in Great Britain. The preparation is put out by the same concern that exploits Sanatogen. The medical profession of this country is now being circularized and advertisements are appearing in medical journals. They already appear in the *Medical Record*, *New York Medical Journal* and *American Journal of Clinical Medicine*. As soon as American physicians have furnished the requisite number of testimonials and have recommended it to a sufficient number of their patients the advertisements will no doubt be quietly dropped from the American medical journals and the advertising pages of newspapers and magazines will be called into service (*Jour. A. M. A.*, Jan. 27, 1912, p. 295).



## SOCIETY PROCEEDINGS

### FIFTY-FIFTH ANNUAL MEETING OF THE MISSOURI STATE MEDICAL ASSOCIATION

Sedalia, May 21, 22 and 23, 1912

#### PRELIMINARY PROGRAM

Subject not announced. W. S. Allee, Olean.  
Auto-Intoxication. J. M. Bell, St. Joseph.  
Training of Physicians for State Hospitals. M. A. Bliss, St. Louis.

Subject not announced. P. T. Bohan, Kansas City.  
Subject not announced. Orville H. Brown, St. Louis.  
Subject not announced. J. D. Brummall, Salisbury.  
Subject not announced. J. Q. Chaubers, Kansas City.

Report of Ten Cases of Duodenal Ulcer. C. C. Conover, Kansas City.

Dietetic Treatment of Typhoid Fever. D. P. Dyer, Sedalia.

Subject not announced. Joseph Grindon, St. Louis.  
Vaccination Treatment of Skin Diseases. H. M. Lyle, Kansas City.

Subject not announced. C. M. Ketcham, Carthage.  
Medical Economics. A. H. Madry, Aurora.  
Insanity and Some of Its Manageable Causes. M. P. Overholser, Nevada.

Training of Nurses in State Hospitals. H. Unterberg, St. Louis.

Habit as a Cause of Many Constitutional Diseases and Treatment of Same. C. Walker Watts, Fayette.

#### MEDICAL SOCIETY OF THE CITY HOSPITAL ALUMNI

The Society held its regular monthly meeting, February 1. The session was held at the City Hospital and the evening devoted to the presentation of clinical cases. The program follows:

1. Aneurysm of the Abdominal Aorta. Dr. W. A. Rohlfing.
2. Pernicious Anemia. Dr. J. Lewald.
3. Pneumonia with Active Tertiary Lues. Dr. J. L. Schwartz.
4. Salvarsan in the New-Born. Dr. T. P. Brooks.
5. Addison's Disease. Dr. P. C. Dyer.
6. Hemiplegia in the Course of a Bilateral Tubercular Hip. Dr. T. F. Wier.
7. Infarct of Lung. Dr. W. P. Parker.

#### ADAIR COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Society was held in the office of Dr. C. S. Wilson at Kirksville, on February 1, the president, Dr. J. W. Martin, in the chair.

The committee on post-graduate work reported having found a suitable room for dissection purposes. The question of securing a subject was discussed during which it developed that there might be difficulty in securing material on account of the rules of the Anatomical Board.

Dr. C. S. Wilson read an excellent paper on "Rhinitis," which was generally discussed.

Dr. E. S. Quinn reported a case of cerebrospinal meningitis. He said the family had refused to allow him to make a dorsal puncture and asked the advice of the members, and light upon the latest methods of combating this dangerous malady. Several of the members felt that a physician would be justified in declining to continue treating a case if the family refused to permit spinal puncture for diagnostic purposes.

J. SCHOOLING GASHWILER, M.D., Secretary.

#### BARRY COUNTY MEDICAL SOCIETY

At the annual meeting of the Barry County Medical Society the following officers were elected for 1912: President, S. A. Newman; vice-president, C. T. Dusenberry; secretary-treasurer, D. L. Mitchell.

The meeting was both pleasant and profitable to all. Among the subjects discussed was "Meningitis." This proved a specially interesting topic and received very considerable attention from the members.

D. L. MITCHELL, M.D., Secretary.

#### BUTLER COUNTY MEDICAL SOCIETY

The Butler County Medical Society met in regular session at Poplar Bluff, February 6, with Dr. Davidson presiding. Those present were: Drs. Davidson, Smith, Mott, Jones, Eskew, Rowe, Cadwell, Taylor and Spaulding.

Dr. Smith reported a case of inanition with extreme emaciation, intense diarrhea and sores over the body, in the rectum and mouth. Nothing could be done as the child was in extremis when first seen.

Dr. Jones reported the case of a child 20 months old who had been healthy except for some bowel trouble. An intense edema and dropsical condition developed which was treated with calomel, diuretics and a tonic. The patient improved for a week, then had a recurrence with loss of appetite, rapid circulation and finally death. A malarial condition was attributed as the cause.

Dr. Rowe reported the case of a girl 13 years old whose trouble started with a chill and temperature of 104 F. She was delirious for thirty-six hours and did not pass urine for twenty-four hours. Tincture of digitalis, salines and warm baths reduced the temperature temporarily; another rise to 104 F. occurred when phenacetin and hot lemonades were given. The temperature then dropped below normal but gradually rose to normal. The bowel movements were very offensive, there was pain on the right side and edema at the base of the lungs. The condition was probably due to auto-intoxication.

Dr. Taylor read a paper entitled "The Diagnosis of Some Diseases of the Heart." He said two things are required in diagnosing heart lesions: first, anatomical position; second, physiological mechanism. The base of the heart corresponds to a line drawn from the first interspace on the left side to the second interspace on

the right side. A murmur of the mitral valve is heard in the fifth interspace and if found in the sixth interspace it is pathognomonic of kidney lesion and an insufficiency calls for digitalis. In stenosis of the mitral valve the murmur is heard in the fifth interspace to the right one inch from the mid-sternal line. A mitral direct murmur and an obstructive auriculoventricular murmur are heard at the juncture of the fourth rib and the costal cartilage. The treatment consists chiefly of correct living and no digitalis. A murmur of incompetency is heard in the fifth interspace and calls for digitalis. In nervous, hemic or functional murmurs give tonics. Dropsical effusions most often indicate aortic insufficiency.

The reading of the paper was followed by an extended discussion.

The program committee made its report and distributed the subjects for the next three months.

The decision of the state insurance superintendent forbidding companies insuring physicians against malpractice suits, was discussed and the secretary was instructed to write the State Association voicing the opinion that such decision was unjust and a menace to the profession.

WM. SPAULDING, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville Thursday, February 8, with the following members present: S. W. Fair, president; H. S. Crawford, secretary; Drs. Adair, H. A. Brierley, Jerard, Miller, Ramey, Triplett, Wright and Yeagle. This was an excellent attendance for this time of the year, but the program was one of special interest, and the members were well repaid for their effort. The following program was carried out:

Symposium on Appendicitis:

a. "Observations on Certain Phases," by J. S. Triplett, M.D.

b. "Differential Diagnosis," by H. A. Brierley, M.D.

c. "Medical Treatment," by R. D. Ramey, M.D.

d. "Surgical Treatment," by J. S. Triplett, M.D.

There was also a general discussion on the subject, in which all present took an active part.

Under the head of "Clinics," a case of acute anterior poliomyelitis was presented by Dr. H. S. Crawford; it was of special interest to the society.

Dr. A. H. Scheer was reinstated to membership in the society, and Dr. R. M. Miller and Dr. J. C. Belcher were elected to membership.

H. S. CRAWFORD, M.D., Secretary.

#### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society held its regular monthly meeting at the office of the secretary, Friday, February 2, the following members being present: Drs. Moore, Bonham, Lewis, Lee, Smith, Gentle, Richards and Watts.

No member having prepared a paper for the occasion and no clinical cases for examination, Dr. Rich-

ards called the attention of the members to the prevalence of acute adenitis in the community, and reported five cases. He had treated by opening the suppurating glands and applying peroxid, boracic acid and ichthyol.

Dr. Moore in discussing the reports, said he had treated by using equal parts of iodoform and boracic acid. Dr. Watts, reporting for Dr. Temple, said the latter had treated two cases very successfully.

Dr. Moore opened a discussion on cerebrospinal meningitis which has been prevalent in near-by states, and suggested that druggists be requested to procure a supply of serum for the treatment of the disease should it appear in this county.

Dr. Lee, in response to a request, discussed the status of salvarsan in the treatment of syphilis; he said it was still proving very successful in nearly all forms of the disease. Dr. Bonham spoke of its good effects in pellagra.

Drs. Gentle and Smith spoke of the good work that is being done in the state and especially in the state institutions in the treatment of tuberculosis.

Dr. Watts was chosen by the Society to read a paper at the annual meeting of the State Association, the subject being, "Habit as a Cause of Many Diseases."

C. W. WATTS, M.D., Secretary.

#### LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society held its first regular meeting of 1912 at Monticello, January 20. The president, Dr. Z. Brainerd, presided.

The following members were present: Dr. W. L. Ellery, Dr. R. B. Schofield, Dr. P. F. Cole, Dr. J. C. Brown, Dr. J. C. Nunn, Dr. T. F. McGlasson, Dr. F. P. Jennings, Dr. C. N. Frame, Dr. R. E. Wilson, Dr. John Ford, Dr. C. O. Shanks, Dr. G. L. McCutchan, Dr. A. C. Crank, Dr. N. O. Owens, Dr. Z. T. Knight and Dr. G. P. Knight.

Great interest was shown in the work of the society by all members present. Several resolutions were passed upon towards the betterment of the society.

The following officers were elected for 1912: Dr. T. F. McGlasson, president; Dr. G. L. McCutchan, vice-president; Dr. P. F. Cole, secretary.

The next meeting of the society will be held at Canton, the first Tuesday in May. It will be an afternoon and night session, a banquet being tendered the society by the physicians of Canton.

#### PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society held its regular monthly meeting at Platte City, Feb. 7, 1912. The usual interest in the meetings was disclosed by the presence of Doctors Redman, Smith, Moore, Coffey, Calvert, Clark and Wilson.

One of the interesting features was a fine paper on diabetes by Dr. Calvert of Weston, which evidenced much thought and careful research. The discussion which followed was highly instructive. In Dr. Clark's



review of his labors in this field, we had the benefit of mature conclusions drawn from practical results.

Dr. Redman, who justly enjoys the reputation of being one of the most successful surgeons and learned practitioners in this part of the state, presented an exhaustive treatise on renal calculi. The marked attention coupled with exchange of views, demonstrated the interest the paper excited.

Fatty tumor of the shoulder removed under local anesthesia with satisfactory results, was an interesting operation presented by Dr. Wilson.

We think Platte County is the home of some of the best talent in medicine and surgery in the state and that the society is well abreast of the times.

R. P. C. WILSON, M.D., Secretary.

#### STE. GENEVIEVE COUNTY MEDICAL SOCIETY

Ste. Genevieve County Medical Society held its regular monthly meeting, February 4, President Rutledge in the chair.

After disposing of routine business and assigning subjects for the next meeting, the application of Dr. Geo. W. Davis of St. Mary's was voted on and he was unanimously elected a member.

There being no further business the meeting adjourned. The next meeting will be held on the second Wednesday in March.

R. W. LANNING, M.D., Secretary.

#### WAYNE COUNTY MEDICAL SOCIETY

Wayne County Medical Society met in regular session at Piedmont, on February 9, the vice-president, Dr. J. W. Hale, in the chair.

Dr. J. F. Wagner presented a patient, a boy about 9 years old, with a distinct bulging over the precordial region and marked apex beat. There was no history of previous sickness except an "occasional attack of fever regarded as biliousness." After an examination by the members the condition was diagnosed as mitral insufficiency with dilatation and hypertrophy.

Dr. J. W. Hale presented a case of heart disease in which the two sides were symmetrical but a distinct regurgitant sound was heard over the aortic orifice and transmitted to the right side; there was dilatation and probably hypertrophy of the left ventricle. This case was carefully examined by the members and diagnosed as aortic insufficiency. Dr. Andrew Hall of Mt. Vernon, Ill., president of the Southern Illinois Medical Association, discoursed upon the case.

Dr. J. P. Price of Williamsville, paid the annual dues.

Visitors present: Drs. N. G. Wilson and John F. Wagner, of Greenville, and Dr. Andrew Hall, of Mt. Vernon, Ill.

R. J. OWENS, M.D., Acting Secretary.

## BOOKS RECEIVED

**A HANDBOOK OF PRACTICAL TREATMENT.** In three volumes. By 82 eminent specialists. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M.D. Late Assistant Professor of Medicine, University of Pennsylvania. Volume III: Octavo of 1095 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1912. Per volume: Cloth, \$6.00 net; Half Morocco, \$7.50 net.

**A HANDBOOK OF MEDICAL DIAGNOSIS IN FOUR PARTS FOR THE USE OF PRACTITIONERS AND STUDENTS.** By J. C. Wilson, A.M., M.D. Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College, etc., etc. 8 vo. pp. 1438. 418 text illustrations, and 14 full page plates. Third edition thoroughly revised. Philadelphia & London. J. B. Lippincott Co. 1911. \$6.00.

**PRACTICAL ELECTRO-THERAPEUTICS AND X-RAY THERAPY WITH CHAPTERS ON PHOTOTHERAPY, X-RAY IN EYE SURGERY AND DENTISTRY, AND MEDICO-LEGAL ASPECT OF THE X-RAY.** By J. H. Martin, M.D. Professor of Electro-Therapeutics and X-Ray Methods in the Medical Department of Baylor University, etc., etc. 8 vo. pp. 446. 219 illustrations. St. Louis, C. V. Mosby Co. 1912. \$4.00.

**RETINOSCOPY (OR SHADOW TEST) IN THE DETERMINATION OF REFRACTION AT ONE METER DISTANCE, WITH THE PLANE MIRROR.** By James Thorington, A.M., M.D., Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, etc., etc. Sixth edition, revised and enlarged. 8vo Cloth. pp. 71. 61 illustrations, ten of which are colored. Philadelphia, P. Blakiston's Son & Co. 1911. Price, \$1.00 net.

## BOOK REVIEWS

**THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL. CHICAGO.** Vol. 1, No. 1. Octavo of 133 pages; illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published bi-monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

This is the first number of Volume 1 of the report of Dr. Murphy's clinical lectures. One volume is to be published every other month.

The main value of the work lies in the explanation of the steps by which a diagnosis is reached. Many points on differential diagnosis are given in a manner which at once impresses the facts on the mind of the reader. Practical applications of anatomy, pathology and surgical principles are presented in connection with the clinical side of surgery in a way that is only possible by a clinical lecture. Many valuable points in surgical technic are explained.

The work should prove popular, the price, however, seems rather high.

# THE JOURNAL

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EDITOR

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A. W. MCALESTER, Jr., M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### COMMON DEFORMITIES IN HIP DISEASE Their Treatment and Correction \*

ARCHER O'REILLY, M.D.  
ST. LOUIS

In tuberculosis of the hip there is a constant tendency toward deformity, due mainly to muscular spasm and the tendency of the diseased limb to assume the position of greatest ease. These deformities are at first flexion, abduction

are very closely associated with inequalities in apparent length. When there is a moderate or even a marked amount of flexion the resulting shortening or tilting of the leg is compensated for by lordosis of the lumbar spine (Fig. 1).

Abduction, on the other hand, is accompanied by an apparent lengthening of the diseased leg, due to the tilt of the pelvis. In abduction the leg is drawn away from the median line. In order to get it under the body the pelvis must be tipped down on that side and up on the other, thus lowering the diseased leg and at the same time pulling up and shortening the other leg.



Before operation.



After operation.

and outward rotation, which is the position of ease; later, as the disease progresses, if the process is very acute or untreated, the flexion becomes more marked and abduction is changed to adduction. This latter position accompanies destruction in the joint and is also found in the so-called "untreated cures." These deformities

\* Read before the St. Louis Medical Society, November, 1911.

In a similar way we have an apparent shortening in the deformity of adduction. Here the diseased adducted leg must be drawn away from the median line in order to secure a firm position under the body; as this tips up the pelvis on that side and depresses the other side, the good leg is apparently lengthened and the diseased one shortened.



The above conditions represent only apparent shortening or lengthening because they are due not to any actual variation in the length of the limb itself, but merely to the tilt of the pelvis. Actual shortening, however, is a deformity in these cases and often quite a marked one. One of the main causes is atrophy and failure of development due to fixation and disuse. The disease itself also has some slight effect on the development of the affected limb. Tuberculous caries of the head, neck and acetabulum, and spontaneous dislocation are responsible for marked shortening.

These deformities may appear at all stages in hip disease, even in the very earliest stage, and

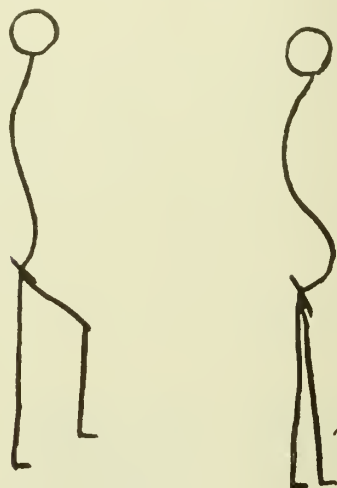


Figure 1.

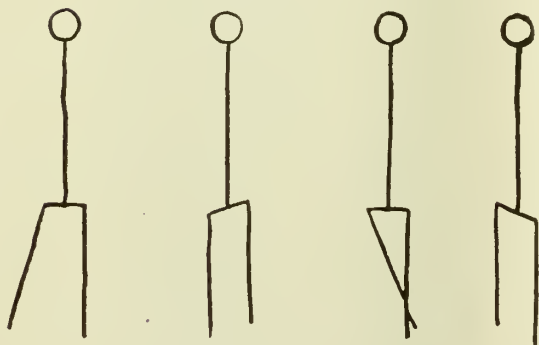


Figure 2.

all cases should be carefully watched so that developing deformity may be checked and corrected at its very earliest appearance. The patient should be examined on a hard, smooth surface, preferably a table. The undiseased hip should be flexed with the thigh on the abdomen until the lumbar spine is flat on the table. Then if there is any permanent flexion the thigh of the diseased hip will be elevated to the degree of flexion present. If we would detect adduction or abduction deformities the pelvis must be level, in which position the deformity will show.

As a rule abduction deformity is not very great. In measuring actual shortening the pelvis

must be even and the legs in a similar position. Then the length of the leg is taken from the anterior superior spine to the internal malleolus.

The treatment of these deformities may be divided into two groups: (1) prophylactic; (2) corrective.

The prophylactic treatment consists in the frequent observation of the case and in the application of properly fitting braces or spicas of plaster-of-Paris or celluloid which will prevent the development of deformity. A moderate degree of abduction, of about 10 to 20 degrees, is desirable and all braces and spicas should be applied to secure this end.

The corrective treatment is directed toward the correction of the deformity after it has occurred, and may be employed during the process of the



Figure 3.



Figure 4.

disease in acute deformity, or later to give a good useful limb after the disease has been cured.

If flexion or adduction develops during the course of the disease, the patient should be put to bed and traction should be applied to the affected limb. This is best done by having a bed frame made of three-eighths to one-half inch gas-pipe. This is rectangular and should be as wide as the patient's axillæ and about 3 inches longer than the full length of the patient. Duck or canvas is laced about the uprights and the patient is strapped to it with straps across the chest and a binder about the pelvis. In this way the patient can be held in one position. Buck's

extension is applied to the leg and traction is exerted by a pulley and weights over the end of the bed. It is very important in these cases that traction should be in the line of deformity. The object of traction is to pull the diseased head out of the diseased acetabulum, thus relieving irritation and allowing relaxation of muscular spasm, which is the direct cause of deformity. In order to accomplish this the pull must be in the line of the deformity, not in the line of correction. This can be seen in the diagram (Fig. 4).

If the pull is in the line A B the pull is against the psoas muscle x z, and the attachment Z serves as a fulcrum of a lever, the long arm of which is Z A and the short arm Y Z with the head at the end of the short arm. The result is that the head is really being forced more strongly into the acetabulum and consequently no improvement will result. On the other hand, if the pull is in the line A C, the psoas does not act as a fulcrum and the head is drawn out of the acetabulum and at the same time the psoas is gradually stretched. In this way, as the muscular spasm relaxes, the leg can gradually be brought down until it is in the normal plane. This also holds good for adduction deformity. When the limb has been finally brought to the corrected position it must be held by a plaster spica or similar arrangement.

If the patient is not seen until the tubercular process has become quiescent or is cured, the hip is as a rule firmly ankylosed. In this condition, the only method of correcting the deformity is by operation. The results of operation are highly successful, and a limb which was of no use whatever can be converted into one which will be very serviceable.

There are several methods by which this can be done. The simplest is the Gant subtrochanteric osteotomy. A chisel is driven through the skin and muscles to the femur on the side of the thigh just below the greater trochanter. The femur is then cut, the bone broken and the leg brought down to the correct position, and then a spica is applied which is worn for about three to four months. There are several disadvantages in this method. In the first place the operator is working in the dark and cannot see what he is doing. The osteotome may slip and cut some important structure. It is necessary to make the incision just at the base of the great trochanter, for otherwise, when the flexion is corrected, there will be an angle in the shaft with fragments which have a tendency to slip over each other; and at the same time the union is apt to be unstable.

As a result of this uncertainty, I have given up this subcutaneous method and use an open method by which the greater trochanter is clearly exposed so that I can tell exactly what is being done. The results are very satisfactory. The patient is anesthetized and prepared for the oper-

ation, he is put on his side with the flexed hip up and a sand bag between the thighs. If the patient is not fat and in a case where the trochanter is prominent, a longitudinal incision 5 inches long is made directly over the trochanter with its center over the lower portion of the trochanter. The incision is carried directly to the bone. Then with a narrow chisel one-fourth inch wide, the femur is divided in a circular direction with the convex side upward. This division is made just at the lower edge of the great trochanter and is carried so as to cut through the lesser trochanter. When the femur is divided the muscles are sutured with catgut and the skin closed, preferably with a subcuticular silver wire. If the patient is fat a curved incision with the center just above the trochanter

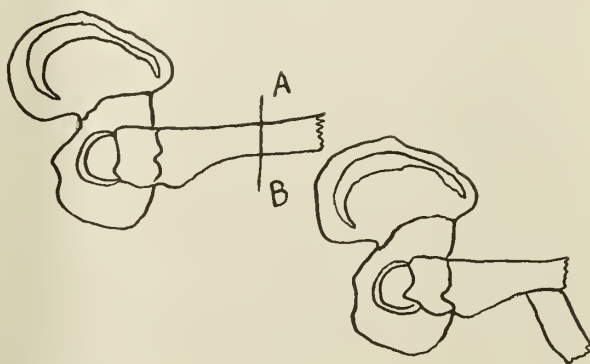


Figure 5.

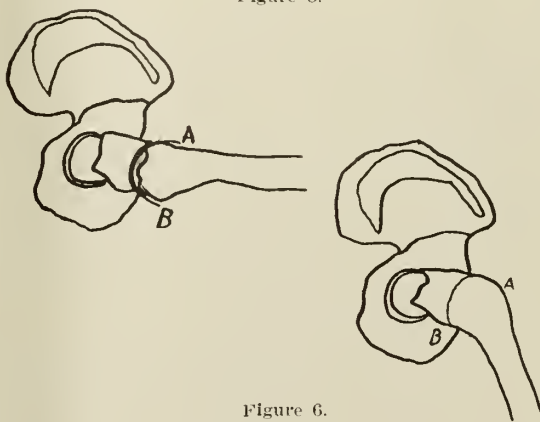


Figure 6.

ation, he is put on his side with the flexed hip up and a sand bag between the thighs. If the patient is not fat and in a case where the trochanter is prominent, a longitudinal incision 5 inches long is made directly over the trochanter with its center over the lower portion of the trochanter. The incision is carried directly to the bone. Then with a narrow chisel one-fourth inch wide, the femur is divided in a circular direction with the convex side upward. This division is made just at the lower edge of the great trochanter and is carried so as to cut through the lesser trochanter. When the femur is divided the muscles are sutured with catgut and the skin closed, preferably with a subcuticular silver wire. If the patient is fat a curved incision with the center just above the trochanter

is better. When the wound has been dressed the leg is brought into a position of about 15 degrees flexion and 10 to 15 degrees abduction and is held by a plaster spica enclosing the foot and running up to the border of the ribs. At the end of ten days a window may be cut in the spica and the stitch removed. The patient must remain in bed for about four weeks. At the end of that time the foot is cut from the spica and the patient is allowed up on crutches. At the end of eight weeks the plaster below the knee may be removed and the patient may be allowed to put some weight on the leg. At the end of ten weeks he may walk on the leg without crutches and at the end of twelve weeks the spica may be removed.



The curved incision in the bone is of considerable importance as it acts as a ball and socket joint and allows the bone to slip around instead of opening up in a wedge shape when the flexion is corrected.

It has also a tendency to prevent the fragments slipping by and give a more firm union.

Actual shortening cannot be overcome except by putting the leg in a position of marked abduction and thus causing an apparent lengthening. An inch or 2 inches may be gained in this way.

403 Metropolitan Building.

#### REPORT ON THE CARE OF EPILEPTICS IN SPECIAL INSTITUTIONS IN THE UNITED STATES \*

WILLIAM C. GRAVES  
CHICAGO

Progress is shown in the treatment and care of epileptics in special institutions of the United States during the last year by a survey of the service in such places.

An issue of vital interest is now before the New York legislature in the form of two bills, one for Craig Colony, the other for Letchworth Village, for the detention of inmates in these institutions for an indefinite period, as is done generally with insane cases, and, in Massachusetts and Connecticut, at least, with feeble-minded cases.

Dr. Charles S. Little, who is known to the institutional world for his work for the feeble-minded at Laconia, N. H., has been chosen superintendent of Letchworth Village.

The Monson State Hospital at Palmer, Mass., has placed the children's colony in successful operation. There is no age limit. The Eugenics Committee met at Palmer. A field worker has been in service for about a year and the results seem to warrant creating a permanent department for that sort of work.

Connecticut has secured a site of about 360 acres near Mansfield Depot for an epileptic colony; a board of trustees was appointed by the governor, and Dr. Donald L. Ross was chosen superintendent. At last reports the friends of the colony were at work with the legislature for an appropriation of \$340,000 for buildings. The plans call for ultimate structures that will have a capacity for 500 inmates.

Iowa, with the earnest support of its Board of Control, passed through the House a bill appropriating \$50,000 for certain buildings for epileptics, but it failed of passage in the Senate for lack of sufficient funds considering other demands. The friends of the epileptic colony idea will go at it again two years hence, in the meantime trying to create more public sentiment.

The Idaho legislature appropriated \$25,000 to start an institution for epileptics and feeble-minded. A site has been selected. It is expected the first buildings will be ready for occupancy two years hence.

New buildings have been, or are being, erected at Letchworth Village, N. Y., New Castle, Ind., Kankakee, Ill., Spring City, Pa., at the new Virginia institution and at Skillman, N. J., and new buildings are provided for early construction at existing institutions at Craig Colony, N. Y., Anna, Ill., Spring City, Pa., New Castle, Ind., and the Emmaus Asylum in Missouri, and at Parsons, Kan.

A report of great interest has been received from Cleveland covering the excellent special service to epileptic children segregated in the Brownell public school. So far as I am informed Cleveland is the only city whose public schools do this sort of work.

An interesting report has been received, also, outlining the work done by the Department of Child Study of the Chicago Board of Education for epileptic children.

My report closes with an extract from Alice Willard Solenberger's book "One Thousand Homeless Men," now being read with avidity by social workers, which gives a clear picture of the epileptic in his contact with social service organizations.

The reports, condensed somewhat, are as follows:

#### CONNECTICUT

Previous to 1900 no special effort was made in the state of Connecticut for the special care of epileptics. In 1900 a committee was appointed by the State Medical Society with this special object in view and the labors of this committee continued till 1905 when a committee composed of the same men was appointed by the legislature to investigate methods for the care and treatment of epileptics residing in the state of Connecticut, to report to the legislature in 1907. After much work the committee in their report to the legislature of 1907 advised that the colony plan was the "most rational, effective and economical" for the care of epileptics, but no definite action was taken at this session of the legislature.

In the next session, 1909, a bill was passed for the establishment of a colony for epileptics to be known as the Connecticut Colony for Epileptics. A committee was appointed by the governor to procure a site for which an appropriation of \$25,000 was made.

A site comprising about 360 acres has been procured near Mansfield Depot, Conn. A board of trustees was appointed by the governor Sept. 16, 1910; this board has proceeded actively to establish a colony. It has appointed Dr. Donald L. Ross superintendent and is making arrangements to proceed just as soon as an appropriation is obtained from the legislature. An appropria-

\* Read at the Tenth Annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics at St. Louis, June 16, 1911.

tion of \$340,000 has been asked for, and it is expected that a large appropriation will be made.

Plans are being formed with the idea of building an institution that in the course of ten or twelve years will accommodate a population of 500 inmates.

#### IDAHO

The last legislature made an appropriation of \$25,000 to start a sanatorium for the feeble-minded and epileptic of the state, and authorized the employment of the prisoners from the state penitentiary in building the sanatorium, as far as practical. A site has been selected near a large tract (2,000 acres) of state land and it is expected that building material will be on the ground this season, a building put up next season, and the sanatorium made ready in two years to receive patients. This is all so far that has been done. The work is to be under three directors and when the sanatorium is ready for occupancy a medical superintendent is to be appointed to direct affairs.

#### ILLINOIS

The policy of Illinois regarding the care and treatment of epileptics is two-fold: first, that insane and feeble-minded epileptics be segregated in specially constructed buildings at institutions caring for the insane and feeble-minded. Secondly, that improvable epileptics, not yet demented and not feeble-minded be segregated in a special, separate institution. In 1910 the legislature appropriated \$50,000 for a building for insane epileptics at Kankakee. This building should be ready for occupancy this fall. The legislature now sitting appropriated \$40,000 for a special building for epileptic women at Anna. The insane epileptics from the other hospitals for the insane will be quartered ultimately at Kankakee and Anna. The present plan is to erect, in time, two more buildings at Kankakee and one more at Anna. A census of insane epileptics in Illinois state hospitals for the insane, taken on May 11 of this year, showed the presence of 655 such unfortunates. On the same date there were present at the Lincoln State School and Colony, the state institution for the feeble-minded, 225 epileptics, making a total of 880 insane and feeble-minded epileptics in the state owned institutions. A rough estimate of the epileptics in county almshouses is 500, making a total of about 1,380 epileptics in public institutions of the Prairie State. Illinois created an epileptic colony in 1897, but during all the succeeding years no legislature has seen its way to appropriate money for lands, buildings, etc. However, the funds will be forthcoming when they can be appropriated in justice to other demands in a scheme of rehabilitation and expansion, fostered by Governor Deneen, that is costing millions of dollars.

#### IOWA

At the last meeting of the Iowa State Conference of Charities and Correction, held in Des Moines last December, an earnest plea was made for the establishment by the state of a colony for epileptics. The Board of Control is heartily in accord with this sentiment. A bill was introduced in the legislature this year for an appropriation of \$100,000 to purchase land and to begin the erection of certain buildings for epileptics. An amended bill, appropriating \$50,000, was passed in the lower house, but failed of passage in the senate, not from any lack of sympathy, but largely from lack of funds.

The superintendent of the four hospitals for the insane, and of the institution for the feeble-minded are all interested in the creation of an epileptic colony, and all took a somewhat active part in presenting the needs of the epileptics before the legislative committees. All, however, realized that all the available funds of the state would probably be needed for existing charities and schools of higher learning and, on that account that it would be difficult to induce the legislature to pass the epileptic colony bill.

During the two years intervening before the legislature sits again, endeavor will be made to create sufficient sentiment to carry the matter to a successful issue.

#### INDIANA

During the last year, the population of the Indiana Village for Epileptics at New Castle has not been increased. The capacity is 116, all male patients. However, four new cottages are nearing completion and will be occupied late in the summer. This will increase the capacity by 100. The ten additional patients can be admitted on the completion of a small cottage, on which work has just begun. The last General Assembly (January, 1911), made appropriations for this institution, for the construction of a steam laundry, a bakery, a storehouse and refrigerating plant, all to be built large enough for the ultimate capacity of the institution, which will be about 1,200. Several small appropriations were made for roads, grading and the improvement of the large body of land. There are no shops. The patients are kept employed at outside work, farming, etc. With the assistance of two paid employees on the farm, the patients raised nearly 14,000 bushels of corn last year and cared for the other crops on a farm of 1,250 acres. Most of the patients are contented. The management is dispensing with window guards and locked doors and is allowing patients more freedom. Superintendent W. C. Van Nuys is a firm believer in outdoor employment for epileptics and his experience has been that epileptic patients who work out of doors daily become interested in the work, are fairly well contented and have fewer seizures.



## KANSAS

The present population of the Hospital for Epileptics at Parsons is 475. The last legislature made an appropriation for a small school building and for a cottage especially adapted for boys. The present population is about the same as the capacity but the hospital has been able so far to take care of all applicants without having to send any epileptics to the state hospitals for the insane, or to poor-houses or jails.

## MASSACHUSETTS

The new children's colony at the Monson State Hospital at Palmer has been put in successful operation so that now there is no age limit and all the suitable children are under school instruction, mostly manual training. The new department accommodates 150 children. This brings the total number of patients up to 900.

A very successful meeting of the Eugenics Committee was held at Palmer in May. Efforts are being made to ascertain the number of epileptic cases primarily feeble-minded. A field worker has been employed for about a year and such good results have been obtained that it is probable that this will be a permanent department. This is the first field worker that has been employed in Massachusetts. Later on it is likely that the State Board of Insanity will take steps to have a worker in the field in addition to those employed at Palmer.

## MICHIGAN

There are 147 females and 159 males, total 306, at the Michigan Home for the Feeble Minded and Epileptic at Lapeer. There are about 400 in the Michigan hospitals for the insane. There is considerable sentiment for a separate institution for epileptics. The question was not considered in the last legislature, however, on account of economy all along the line for special appropriations.

## MISSOURI

Epileptics are confined to a large extent with the insane in the four Missouri state hospitals, but it is at least the intention of the state authorities that the non-insane epileptics should be taken care of at the Missouri Colony for the Feeble Minded and Epileptic at Marshall. There are about 700 epileptics in all the state institutions. There are 5,000 or 6,000 epileptics in the state. It is the intention of the state officials to improve methods of caring for epileptics, though the most desired development—that toward a colony treatment in the true sense—is not yet in sight.

The Emmaus Asylums for Epileptics and Feeble Minded at Marthasville and St. Charles, which is not a state institution, suffered a \$6,000 visitation by fire in the St. Charles institution on June 3. The building was fully insured. All the inmates were taken out safely. The new

superintendent's residence is being built at Marthasville. When the fire damage has been repaired at St. Charles the management will consider the erection of a cottage for a special group of patients, not yet determined. A friend of the institution has provided \$9,000 for this purpose.

## NEW JERSEY

A school house and cottage for patients have been completed at the New Jersey State Village for Epileptics at Skillman and are about ready for occupancy. The cottage provides accommodations for about fifty extra patients. An appropriation has been made for a custodial building, and an additional building for the general epileptics. Appropriations are available for the extension of the water system, enlarging and extending the sewer system, extending the macadam roads, for trees and shrubbery, farm buildings, including a hay barn, a machinery barn and root cellar, an addition to the dairy, piggery, chicken house and ice house. When the buildings already provided for are erected and equipped, the capacity of the institution will be about doubled.

## NEW YORK

There are now in the New York State Legislature two bills—one referring to Craig Colony for Epileptics, the other to Letchworth Village, for the epileptic and feeble-minded—to provide for the detention of the inmates of these institutions so that they may be kept therein for an indefinite period.

The work at Letchworth Village has progressed as rapidly as funds have permitted. A railroad siding  $1\frac{1}{2}$  miles in length has been built. The dam for water-supply is being started, several miles of water main have been laid and a sewage disposal plant is partly completed.

Dr. Charles S. Little, formerly of the Laconia, N. H., institution for Feeble-Minded, was appointed superintendent of Letchworth Village July 1, 1910. He was selected, after a competitive examination, from a list of successful candidates submitted by the State Civil Service Commission. Dr. Little's name headed the list.

Two small frame dormitories have been built to accommodate fifty patients each. Immediately adjacent to these, two large farm houses have been remodeled to provide on the first floor a kitchen and a dining-room for employees and dining-room for patients, the second floor of these structures to be occupied by employees. Considerable work is planned for the coming year, if appropriations are secured. One hundred feeble-minded men have just been admitted. It will probably be some time before any epileptics will be cared for.

At the Craig Colony for Epileptics a new dormitory, to accommodate sixty patients and to cost \$40,000, is to be erected in place of an old four-

story frame structure, which was on the colony site at the time of its acquisition by the state. An item is now in the appropriation bill for an amusement hall and a central school building.

The Craig Colony is laboring under the difficulty of being an institution in which dormitories were erected year after year without proper development of other essential features, such as a power plant of sufficient capacity, large store rooms, amusement hall and like features. The State Board of Charities has decided on 1,500 as being the ultimate capacity of the colony. The original intention was to have accommodations for from 1,800 to 2,000 patients.

A continued effort is being made to secure a widespread feeling in the state that there should be laws restricting the marriage of defectives of various kinds.

#### PROVINCE OF ONTARIO, CANADA

No new buildings or policies.

#### PENNSYLVANIA

A new ward building to accommodate 200 patients has been completed at the Eastern Pennsylvania State Institution for the Feeble-Minded and Epileptic at Spring City. This building will be occupied August 1. Plans for a power house and laundry are being prepared and work on these will begin at once. One of the farm buildings has been opened as a cottage for the patients working on the farm. The total capacity of the institution is 600 males.

The Passavant Memorial Homes for the Care of Epileptics, located at Rochester, have entered on a campaign for another cottage to cost \$18,000, of which sum \$10,120.34 had been secured at last reports, and for a chapel to cost \$10,000, of which sum \$2,100 has been secured.

#### TEXAS

The last legislature made no appropriation for improvements at the State Epileptic Colony at Abilene. A hope is expressed that the session in August of this year will provide money for two new cottages.

#### VIRGINIA

The Virginia State Epileptic Colony has erected one brick building with day room, dormitory, kitchen, dining-rooms and laundry with a capacity of 100 patients. A steam vapor heating system, electric light and power plant have been installed and a water-supply secured. Buildings on the property have been repaired for use of employees. The farm has been improved and a large brick colonial mansion has been equipped for an administration building. The building for patients has been named the Drewry-Gilliam Building in honor of Dr. William F. Drewry and Mr. Robert Gilliam, two distinguished members of this association. The institution is under the control of a special board of three members

whose personnel consists of Dr. H. W. Dew, Lynchburg, Hon. I. P. Whitehead of Amherst County, and Hon. S. L. Ferguson of Appomattox County. The institution having been completed so as to provide accommodations for 100 patients, according to law, formally became a part of the general state hospital system of Virginia on April 19, 1911, at which time Dr. A. S. Priddy was elected superintendent. One hundred patients as directed by law have been transferred from the three state hospitals for the white insane, there remaining at present some 175 epileptics in the three institutions.

In view of the fact that the work of selecting a location for this colony and of building had been so long delayed, the legislature made provision for the care of only 100 until its meeting in February, 1912, when there is good reason to believe that ample provision will be made for the accommodation and support of all the epileptics now in the state institutions and that after that the usefulness of the institution will be extended to the care of those epileptics not committed to the state institutions as insane. A separate night force of attendants is employed. Only males are now taken for the obvious reason that with one building and such a small number of patients it would be impracticable to have patients of both sexes in the building. The institution has met the approval of the public and the state officers of Virginia to such a degree that its administrative officers and friends can reasonably anticipate proper aid being given it by the state and that it will continue to grow until it develops into a large and useful institution.

#### PUBLIC SCHOOLS, CLEVELAND, OHIO

In the fall of 1906, a special school for epileptics was opened in the Brownell public school building at Cleveland, Ohio. There were enrolled at once six pupils, all 11 or 12 years old, taken from the regular schools in the primary grades, as none of them had been able to get beyond that point. These pupils had become a great annoyance to both teacher and pupils, and in some cases a menace to other pupils, because of their quarrelsome dispositions and their inability to control themselves. They were also a source of great nervous strain on the teacher, and on the sensitive pupil, so that it seemed wise to remove them from the regular school, for the good of the school. A teacher of experience, herself a mother, was placed in charge of the school.

During the opening days, an epileptic fit was a daily and sometimes an hourly, occurrence. The seizure of one pupil seemed to act as a signal for the others. On occasions two and sometimes three pupils were having spasms at the same time.

This certainly looked as if they were not good for each other, if this were to continue, but here the wisdom of the teacher showed itself. Gradually they were led to see that by self-control they



could in a measure overcome their deficiencies, that to give way to ill-temper and to such outbreaks made them not only disagreeable to others, but caused harm to themselves. In this particular the value of segregation showed itself, for here, the teacher having only the few, could reason with each child, showing him what he could do, in a way that the teacher with a full school could not possibly do. Experience proved that by constant watching spasms often were warded off, and this, too, could not be done in the regular school room, so here again was a gain.

The teacher also noticed that more often than otherwise, these spasms were the result of some irritation caused by another pupil, and very often at the recess in the yard, so that in time the pupils were given all their intermissions when there was no one else in the yard.

Coming from different parts of the city, often quite long distances, they had to bring their lunches and eat them in the room. The teacher found this a fruitful time to study their peculiarities, after they had been in the room long enough to feel free. Here, too, was an opportunity for the special teacher which could not come to the grade teacher. It was during the lunch hour the teacher discovered it was quite a popular thing to show each other, and especially a new-comer, "how to throw a fit," as they expressed it. Here was a golden opportunity to teach them such exhibitions were to be fought against rather than paraded, and that if they desired to help each other and help the teacher and the school, each must set a good example.

Slowly but surely one and another became interested in some line of work, found out that he could do some things well, grew less irritable and tricky, the spasms grew much less frequent, until at the end of the fourth year those who had been there the four years rarely had a spasm at all.

These children profit or are harmed by example in a marked degree, so as one grew strong and showed it by his conduct it reacted on every pupil in the class.

By studying them at all times, and profiting by experience, the teacher's influence over these children grew daily. The children became more peaceable, more obedient, and more able to control themselves, with the very encouraging result already stated.

#### PUBLIC SCHOOLS, CHICAGO

Epileptic children of school age come to the notice of the Chicago Board of Education at the instance of parents, guardians, principals or social workers of one kind or another. They are brought to the office of the Department of Child Study or are examined at the schools; but as can be readily seen the children are not reported until they have become a distinct menace to the other children, so that the officials act only on complaint and primarily to protect other chil-

dren; but an attempt is made to do more than this for the cases that come immediately before the officials: although, to be sure, there is no institution to which they can be sent. There are a number of homes in and around the outskirts of Chicago, in charge of physicians, where epileptic children are made a specialty. From time to time a number of children have been sent to these homes, but the result has not been very good except as a means of temporarily relieving the family, and securing a more regular regimen of hygienic treatment than the home could afford. The authorities likewise get in touch with the family physician, and through the medium of the school nurse and the public dispensaries get a great deal done for the poor children. In the cases of those who are well-to-do, reliance is placed entirely on the family physician for their care.

It is estimated that there are about 200 epileptic children of school age that have been excluded from the public schools for the protection of other children, and who are in direct need of the best physical care that can be given them to prevent their deterioration and to institute some means for their recovery. There are a larger number than this who do not show grave signs of the malady, and do not even give evidences of petit mal. These belong to neurotic families and should have the very best possible care that can be afforded.

Mr. D. P. MacMillan, director of the Department of Child Study, writes: "I am greatly interested in having a state institution for the epileptics with a wing or annex for children, and I am sure that from 150 to 300 should be sent there. Activities through the Children's Hospital Society for a state institution two years ago, and last year, have not been successful. We are yet hopeful and solicitous that this can be brought about. In the majority of cases, epilepsy for adults means custodial care, but we are all interested in prevention, and that turns our attention toward the detection of the malady early in the life of the child, even before its overt evidences become palpable to onlookers. I hope that you will be eminently successful in your advocacy of the cause of the epileptics, and I sincerely hope that in the near future we may have institutions or homes for the care of such children in this city."

#### EPILEPTICS AMONG 1,000 HOMELESS MEN

Interesting light is shed on epilepsy from the viewpoint of the social worker in the book "One Thousand Homeless Men," by Alice Willard Solenberger, fresh from the press of the New York Charities Publication Committee and one of the books put out by the Russell Sage Foundation. The volume presents an analysis of the cases of 1,000 homeless men that were investigated by the Chicago Bureau of Charities during

1900-1903 inclusive. Chapter 6 of this interesting book is entitled "The Insane, Feeble-Minded, and Epileptic." In the division of the chapter devoted to the epileptic the writer states:

"Of the eighteen epileptics in this group of the mentally diseased and defective (the insane were fifty-two and the feeble-minded nineteen, or a total of eighty-nine defective out of the 1,000), there is not much to add to what has already been written about the insane and the feeble-minded.

"It always seemed as if we should have been able to do more for the epileptics who applied to the Bureau of Charities for help than we actually accomplished. Between attacks most of them were so normal mentally, and so well physically, that they seemed to have a great advantage over either the insane or the feeble-minded. Practically, we found that they were almost as difficult as the latter classes to keep employed and to render self-supporting. Epileptics who have good homes to fall back on when unemployed may be able to earn their own support between attacks, but those with whom we dealt, who were homeless and friendless, were not able to do so."

After describing the provision for the care of epileptics made in various parts of the United States, the writer concludes the chapter as follows:

"We at the Bureau office could send epileptics who belonged elsewhere out of Chicago, we could secure aid from relatives for a few, and could find temporary employment, from time to time, for some others. In a few instances, where insanity was linked with epilepsy, we could and did place men in asylums for the chronic insane. But on the whole our work for this class, as for the feeble-minded, was unsatisfactory and must remain so until the needs of these pathetic groups are more generally recognized and better provision is made for their care in all states of the Union."

I am indebted for the above information to Dr. William T. Shanahan and Mr. F. B. Kirkbride, New York; Dr. David F. Weeks, New Jersey; Dr. Everett Flood, Massachusetts; Dr. Donald L. Ross, Connecticut; Dr. George Mogridge, Iowa; Dr. M. L. Perry, Kansas; Dr. G. L. Chamberlain, Michigan; Dr. Jno. W. Givens, Idaho; Miss Jennie B. Johnson, Ohio; Mr. D. P. MacMillan, Chicago; Mr. W. T. Cross and Rev. J. W. Frankenfeld, Missouri; Rev. F. W. Kohler, Pennsylvania; Mr. A. L. Bowen, Illinois; Dr. T. B. Bass, Texas; Dr. J. J. Williams, Province of Ontario; Dr. A. S. Priddy, Virginia; Dr. H. M. Carey, Pennsylvania; Dr. W. C. Van Nuys, Indiana.

Requests for reports from other states and institutions have not been complied with, accounting for omissions in the foregoing.

## THE PREVENTION OF EPILEPSY \*

M. L. PERRY, M.D.

PARSONS, KAN.

Epilepsy is unquestionably one of the most serious and intractable diseases in the whole catalogue of human ailments. Its wide-spread distribution, comparative frequency and far-reaching effects not only give it an important place in medicine but make it a factor of no small consequence in sociology. It is conservative to put the number of epileptics in the United States at the present time at approximately 200,000, a ratio of 1 to 450 of the general population. The number is constantly increasing, at least in proportion to the increase in population, and probably at a somewhat greater rate. The disease when well established is exceedingly difficult to cure and a very considerable per cent. of cases are absolutely hopeless from the beginning. All authorities agree that the per cent. of curable cases is small. Spratling, one of the most optimistic writers on the subject, says: "It seems fair, on the whole, to say that even with an almost entirely chronic class we may expect a cure in about 5 per cent.; if all could come under treatment early enough this percentage could undoubtedly be doubled or trebled." Turner regards 10 per cent. of epileptics as curable, while Nöthnagel puts the percentage as low as 4 or 5. My experience would incline me to the opinion that even under the most favorable conditions not more than one case in ten of genuine established epilepsy is curable. Under existing conditions, when most patients are allowed to drift into a state of chronicity by lack of attention or the continued administration of patent nostrums before coming under proper treatment, the percentage of cures is certainly very much less. The outlook in this direction being so thoroughly discouraging, it is well to fall in line with the present drift of medical progress and investigate the prophylaxis of this disease. This I believe to be a more promising field for action and one from which very much better results may be expected.

A comprehensive and scientific discussion of prophylaxis must necessarily include a study of causation, as the success of efforts for the prevention of disease depends largely on a knowledge of its etiology. The causative factors in the production of epilepsy are usually referred to as either predisposing or exciting. As examples of predisposing causes may be mentioned heredity, age, dissipation, vicious habits, prolonged ill health, and infantile cerebropathies; and among the exciting causes are emotional shock, improper diet, irregular habits of eating, trauma, and reflex irritation. Practically all authorities agree in the opinion that the inheritance of an unstable and

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poorly balanced nervous system is the most important cause in the development of this malady. Writers on the subject and institutions having charge of epileptics have advanced much statistical matter showing the percentage of cases having a hereditary taint. These statistics have for the most part been based on incomplete and indefinite case histories and, while convincing, have little scientific value. More careful and painstaking investigations with the aid of trained field workers have been instituted in several states within the last few years. The work of these assistants, specially trained for the purpose, has demonstrated beyond all question by means of carefully worked out pedigrees the intimate relationship existing between such morbid conditions as insanity, hysteria, chronic alcoholism, feeble-mindedness, and epilepsy, and that individuals suffering from any one of these diseases are very liable to have offspring who will develop the same or one of the related ailments. Drs. Cannon and Rosanoff have quite recently published some work of this kind which tends to prove that a predisposition to these allied diseases is transmitted in accordance with the well-known Mendelian laws. If a further study of the subject demonstrates the correctness of this theory a long step will have been made toward the clearing up of this phase of the vexed question of heredity in man, and a vantage point gained from which to combat the evil of the transmission of nervous diseases. That the majority of individuals so afflicted marry and have children is a fact that cannot be disputed. It is indeed surprising to find how large a number of those afflicted with so grave a disease as epilepsy marry. About one-third of the adults admitted to the Parsons State Hospital for Epileptics have been married, and of this number more than half married after the development of epilepsy. The most exhaustive study of the children born of epileptic parents of which I have any knowledge is that reported by Echeverria based on an observation of 133 married epileptics. Of 533 children born to these people less than one-fifth were normal and healthy. The other four-fifths suffered from some nervous disorder, many being epileptics, idiots, or insane. The last published Special Report of Paupers in Alms Houses issued by U. S. Census Bureau shows that more than half of the paupers whose marital condition was known were classed as married, widowed, or divorced. This percentage is all the more striking when it is noted that the total number considered includes children as well as adults; the greater number of such paupers are defectives or delinquents. So long as criminals, degenerates, epileptics, imbeciles and confirmed drunkards are allowed to marry and procreate offspring we can expect nothing else than an ever-increasing number of neurotics, part of whom will develop epilepsy. How to restrict or to prevent this propagation by the unfit is a

question that is only beginning to receive the attention it deserves. Sterilization has been advocated by some as a remedy for this evil and a few states have adopted laws permitting the sterilization of certain classes. The types coming under the provisions of the law, however, are the ones from which we may reasonably expect the least danger of transmitted disease, as they are already segregated more or less permanently in institutions and prisons. There exists in the minds of the people such a deep-seated feeling against resorting to any sort of mutilating operation, no matter how simple, except within very narrow limits that I doubt if much of practical value results from legalized sterilization for many years to come.

More rigid restrictions governing the issuing of marriage licenses and the enactment of carefully drawn laws forbidding the marriage of epileptics, imbeciles and other defectives would do much toward checking the increasing number of epileptics as well as other neurotics. That there is a crying need for more restriction in this direction cannot be gainsaid. It certainly would not be unreasonable to require the insertion in the license of a sworn statement signed by the applicants certifying that they are free from the above-named diseases. According to such definite information as I have been able to obtain there are but seven states which have statutes forbidding the marriage of epileptics and other defectives not included in the insane, low-grade imbecile, and idiotic classes. In five of these seven states this law is said to be enforced. In the other two it is reported as openly and frequently violated. That the question is being more widely agitated and coming more before the attention of our law makers is shown by the fact that bills of this kind were considered by the legislatures of eight other states during the sessions of 1911. The chief reasons assigned for the non-passage of these bills were that they were too far-reaching and drastic. It is certainly unwise to attempt to force the passage of measures of such a character that they will not receive the endorsement of the general public. A law of this kind that does not meet with the approval of the majority of the people will usually be annulled by simple non-enforcement. It were better to make haste slowly and be content, for the time, with the enactment and rigid enforcement of laws prohibiting the marriage of those afflicted with a few of the more pronounced types of nervous and mental defects such as epilepsy and feeble-mindedness, depending on future amendment to broaden the scope of the law whenever the public mind has been educated up to a realization of the need of it. Concerted action of this kind on the part of all or a large number of states would undoubtedly decrease the number of epileptics and defectives. No law can be passed that is broad enough to include all neuroses, and

there will always be a large number of individuals corresponding to Mendel's impure dominants — apparently normal but potentially neurotic — who will transmit a weak and unstable nervous system to at least a part of their offspring. Such children, who have inherited a predisposition to epilepsy and allied neuroses, usually show early in life an excessive nervousness, are prone to reflex convulsions in infancy, and to night terrors, are irritable and given to violent outbursts of temper, and are highly emotional.

The care and management of nervous children has an important place in preventive medicine and as it is from this class that the ever increasing number of epileptics is largely drawn, it very properly comes within the scope of this thesis.

The special care of the nervous child should begin in early infancy and be continued until after puberty. Many of these children are wholly or to a considerable extent bottle-fed babies. Every nervous baby should be fed exclusively on mother's milk for the greater part of the first year if it is at all possible for sufficient nourishment to be obtained from this source. If not, properly modified cow's milk is the best substitute. During the first two or three years these children are especially liable to reflex convulsions from irritation of the gastro-intestinal tract due in almost all instances to dietetic errors, such as irregular and excessive feeding, too early use of solid food, etc. The seriousness of reflex infantile convulsions and their possible after-effects is not fully appreciated by either the laity or the average general practitioner. Dr. A. Jacobi in an article on "Causes of Epilepsy in the Young," calls attention to this subject as follows: "Every convulsion, ever so slight or short, may produce cerebral hemorrhage with all its possible results — epilepsy, idiocy, paralysis, and insanity." In intimate relation to the convulsions of infancy and early childhood stand the postnatal infantile cerebropathies which play such an important part in the causation of epilepsy. Whether these lesions are vascular in origin, as has been taught by some authorities and as indicated by the above quotation from Jacobi, or are infections, as seems to be the prevailing idea at this time, is too broad a subject to be discussed at any length in this paper. The probability is that each of these pathologic conditions may be found in different cases. Lugaro, in his recently published *Modern Problems in Psychiatry*, says: "The infections which arise in the first years of life and especially the inflammations of the gastro-intestinal tract, the result of unsuitable alimentation during the lactational period, are the most important factors in determining the majority of cerebropathies, and in this way a crowd of idiots, imbeciles, and epileptics is produced who encumber asylums and are an enormous drain on the internal economy of the country as also on public charities." Every student of epilepsy having a wide clinical experience with the disease must have been

impressed with the large number of epileptics whose case histories show that their first seizure came on apparently as a reflex convulsion or was preceded by an attack of convulsions with severe gastro-intestinal disturbance, fever, and great prostration. I have observed many cases of this kind and in my experience they have occurred for the most part in children who were known to be unusually nervous or from neurotic families, and often have been associated with gross errors in diet. Both the so-called simple reflex convulsions and the more severe attacks resulting in infantile cerebropathies are to a great extent preventable, and a rigid prophylaxis applied to these conditions would have a very decided effect on the prevention of epilepsy. As preventive measures, a nutritious non-irritating diet in restricted amount, taken at regular intervals would hold first place, and the judicious use as occasion demanded of some nerve sedative, as bromid of soda, would rank second. These two measures in connection with the ordinary rules of hygiene will work wonders with the nervous and neurotic child. As individuals of this type grow older they should be shielded as much as possible from severe and exhausting nervous strain, being held back rather than pushed in their school work and given special care during the periods of physiologic stress. Their emotional state is quite unstable and they should therefore be carefully guarded from psychic or emotional shocks. Shocks of this kind are well-known exciting causes of epilepsy especially in females. The first convulsion occurs more often as a result of a sudden fright but it may follow unusual or violent excitement. Few recognize the extent to which the body both in health and disease is influenced by mental states, or realize the danger of too violently playing on the emotions. If these facts were more generally known and better understood there would be less of that indiscriminate frightening of children, which in the weak and nervous is little short of criminal.

Teachers should have their attention called to this subject, as disastrous results sometimes follow the injudicious administration of corporal punishment. A few years ago there came under my care a girl who, although a nervous and timid child, had been considered healthy and bright mentally up to the tenth year. At that age while in school she was whipped by her teacher for some trivial offense. Before the punishment — not a severe one — had been concluded the child fell in a convulsion, the beginning of a well-marked epilepsy which had existed for six years before she came under my observation and which gave every indication that it would continue throughout her life. Gowers says that emotional shock is a cause of epilepsy in 5.5 per cent. of all cases. This percentage is somewhat higher than I have found in my own experience, but all neurologists agree that emotional shock is a not infrequent cause of this disease. A large number of these



cases could be prevented by more careful and judicious management of nervous children.

A considerable number of cases of infantile cerebral palsy are caused by injuries received at birth. The lesions in such cases are usually meningeal hemorrhages and occur as a result of long, tedious, and protracted labor or from the use of obstetrical forceps. More care and skill on the part of those practicing obstetrics would materially reduce the number of such injuries, and as more than 50 per cent. of those so afflicted subsequently become epileptics such a course would also reduce the number suffering from the latter disease. Not all such birth injuries are preventable and when a hemorrhage of this kind does occur an effort should be made to relieve it by surgical interference. Dr. Harvey Cushing has reported some successful operations for the relief of this condition. In a recent article published in the *Johns Hopkins Hospital Bulletin* he says in reference to operations for the relief of intracranial hemorrhage in the newborn: "About half of these patients succumbed during or soon after the operation, but some made excellent recoveries without the dreaded spastic paraplegias which Little was the first to ascribe to accidents of birth. The second of the cases described in my original report is now a healthy and normal child of 5 years of age." In view of the serious nature of these cases and the disastrous complications that are almost sure to develop, such surgery even with a mortality of 50 per cent. may well be considered conservative.

Surgical interference for the relief of head injuries other than those occurring in the newborn has an important place in the prophylaxis of epilepsy. The percentage of cases of epilepsy due to head trauma is comparatively small but I have found it to be higher than that given by some of the older writers. This I attribute to the more extensive use of machinery and a proportionately larger number of accidents in recent years. Every case of injury of the head with fracture and depression of the skull should be operated on at once also those showing symptoms of pressure and irritation even when no fracture can be made out. Prompt resort to surgery in these cases can usually be depended on to prevent the development of epilepsy unless there has been much laceration of brain tissue, and it should be borne in mind that surgery for the relief of traumatic epilepsy when the disease is well established is very uncertain and in chronic cases a measure of doubtful utility.

The time at my disposal will not permit the discussion of several prophylactic measures of recognized value. In conclusion I can briefly refer in this connection to the importance of the more or less permanent and enforced segregation of a large number of defectives, delinquents, and neurotics. This policy has the endorsement of many sociologists and workers in the field of practical charities and undoubtedly would be

more widely adopted were it not for the expense of carrying it out. It is a question, however, if it would not in the end be real economy to the state. In a properly constructed and well-managed colony such classes can be made comfortable, partially self-supporting, and comparatively happy, and society can thus be protected, probably better than in any other way, from the additional burden incident to the propagation by them of others of their kind.

#### A PLEA FOR MORE PHYSICAL EDUCATION IN OUR PUBLIC SCHOOLS \*

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A year or two ago the whole country was startled by a disaster so horrible that men all over the country wept when they read the accounts of it. Mothers for weeks sent their little ones to school with many misgivings and school boards everywhere began the inspection of school buildings and thousands of dollars were spent in building fire escapes and making the buildings more safe from accidents. Since then in that same city and in every other city of equal size, many times that number of children have perished from preventable causes, and scarcely a comment raised. It would take a disaster like the Cleveland fire almost every day in the year to keep pace with the march of death among the school children of our land. During the coming year, near a hundred thousand children will end their little lives with scarcely the bloom of babyhood yet faded from their cheeks and thousands of Rachels will mourn for their children and not be comforted, and this will continue until the people arouse from their indifference and say to the Reaper: "You shall not 'gather the flowers that grow between.'"

The medical profession is realizing more and more that their greatest work is not to cure disease but to educate the people how to prevent it. They can point out the way to the teacher and through them bring about changes for the betterment of humanity of which the public has yet scarcely dreamed.

Before the doctor and teacher can accomplish a great deal in this forward movement we will have to broaden very greatly our idea as to what constitutes a proper education and what is the state's whole duty to the children. The object the Greeks kept constantly before them in their schools was to produce a sound mind in a sound body, and the more important of the two was the sound body. As a result of this effort they produced a type of manhood both mentally and physically that the world has never equaled before or since. We are neglecting almost entirely the physical side of the child's development, and we

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do not realize that the sound body is much more important than the educated mind. Of what use is an education if the child dies before it reaches maturity or becomes a charge on its friends or the state after it reaches maturity? Of what use is all this great effort to educate the child if its physical condition is such as to render it incapable of being benefited thereby? The state spends millions of dollars, builds thousands of fine buildings, and employs the very best teachers obtainable, and it is all wasted on a large per cent. of the children because of physical defects which destroy their capacity to learn.

What is the state doing to produce this sound body? Practically nothing, except in a few large cities. The state will continue to do nothing until the public is made to realize that it is under just as great an obligation to care for the physical development as it is to develop the mind. I am unable to see why the state should do so much for the mind and allow the body, like Topsy, to just grow up. Is there any reason why the mind should have such excellent teachers and the body be left in the care of the most ignorant parents and directors, or possibly no directors at all? Why is not the class of Italian, Greek and Polish mothers that we are accustomed to see in this country, just as competent to train the intellect as they are to direct the physical development of their children? When an Italian mother rolls her baby up tightly in an 8-foot strip of cloth, so it can neither kick, roll or scarcely breathe and lays it away for safe keeping until its legs are deformed, the lungs under-sized, and the back of its head is flat from constant lying on it, is she showing fitness as a physical director? When she with seven or eight others sleeps in one small tightly closed room what must be the result? Could any effort that she would make as an intellectual teacher do more harm than this? Would not a child educated in our schools and brought up in such surroundings be very much like Lincoln's Mississippi steamboat that had a one horse engine and a two horse whistle and when the whistle blew the boat stopped?

If it is the state's purpose to develop the child into a useful citizen, why should it not take up this side of the child's growth and put it on an equal footing with the other? If every teacher and doctor in the country should take a firm stand on this question and demand that the physical welfare should receive at the hands of the state the same care that it gives to the mental training, the change would come within one year and the results in the years to come would be tremendous. The Greeks exposed their weak children on the mountain and the end came quickly; we neglect ours and the end comes more slowly, but surely. When at some future time posterity looks back on the condition that prevails to-day it will behold no darker picture, no more dis-

graceful thing than our weak surrender to sickness and death the children of our land. What excuse can we offer for the fact that half of the children born into the world die before they reach manhood and that 70 per cent. of them suffer some physical handicap at the very threshold of life. Why not take a higher ground and say we can and will save these weak children and cause them to grow up to be strong and useful citizens?

When a child enters a school the teacher or superintendent examines it to find out the branches in which it is backward, where it is strong and where it should be placed in the general course. In a like manner when the state has once decided to direct the physical growth of the child it should provide a competent medical examiner, who should examine the child thoroughly and give a complete record of all diseases present, note any lack of development and get as complete a history of the child's family as possible. He should find out if the child is getting sufficient food and clothing and if its home is sanitary. Not until this is done can any intelligent direction be undertaken, nor means provided to correct the defects and keep the development up to the highest point. This examination should be made monthly throughout the year, and in order to carry out the orders of the medical examiner there should be a regularly employed expert physical director, who should work with the medical examiner, collect the necessary information, visit the parents and secure as far as possible their cooperation. This director should teach personal hygiene and public sanitation from the first grade to the graduating year. The director should not only teach it, but see that they practice it until this practice becomes a part of them and until they would rebel at any omission or infraction of these rules. When all this has become second nature to the children, they will carry these ideas into their homes where the parents and older brothers and sisters would assimilate them and superstition and pernicious habits would disappear like a mist before a morning sun.

Let us mention briefly a few things that the adoption of this idea of physical education and development would lead to and has already to some extent, in some of the large cities. First should be mentioned the equipped playground. The great benefit from these playgrounds has become so apparent that nearly all the large cities in this country have established a system of them independent of the public school. Chicago, New York and Philadelphia have each spent millions of dollars on a complete system. Massachusetts passed a law requiring every city of 10,000 inhabitants to submit to a vote the establishment of a municipal playground. One-tenth of the city of Boston is devoted to parks, playgrounds and bathing beaches. And the mayor declares that Boston is undertaking the bringing



up of its children with equal care for the body and mind. Ex-President Roosevelt declared that Chicago's great playgrounds were one of the greatest civic achievements of all ages. Volumes could be written on these outdoor gymnasia, but to state briefly, they give fresh air, sunshine, directed exercise and clean, sociable thoughts and habits. There is a woful lack of these among city children. The outdoor school is fast becoming an established institution. In Chicago and New York it has been tried and found successful beyond all expectation. So-called cold storage rooms, or rooms with all the windows kept open winter and summer, have proved a success; and the time is coming soon when each school will have one or two such rooms. Tents could be placed on the roof of many large buildings and those utilized as outdoor schools. The old idea of mental classification alone would give way and there would be a *physical* classification *also* and each class would be looked after according to their physical needs.

The ventilation of the whole school would be made a fact and not a theory only.

The record of the child and its family history would show whether the child was sufficiently nourished and this would lead to the adoption of the lunches furnished by the state to all whose condition demanded it. Fewer hours of study and more exercise and play each day with all year school would in time be adopted. The lighting and heating and the whole sanitation of the school house and grounds would be more closely studied and better managed. All phases of personal hygiene would be taught and the practical application of it made while in school.

When the schools have taken up this work and made it a fact, the general health of the public would be greatly improved, many diseases would be discovered in their incipency and their eradication made possible. The weak would grow stronger and the strong would escape many attacks from needless exposure.

Now let us see what such a course would accomplish in the fight being made against the greatest scourge of the human race, tuberculosis. Tuberculosis is a disease that may be located in any part of the body. We have tuberculosis of the lungs, tuberculosis of the bones and joints, tuberculosis of the intestines, stomach, kidneys, skin and in fact no organ or part of the body is free from its ravages. It is caused by a germ belonging to the bacillus group and is called the *Bacillus tuberculosis*. It positively will not live when long exposed to fresh air and sunshine, nor can it grow in any part of the body when that body is supplied with a rich blood and strong vitality; but it may live indefinitely in the dust of dark corners, in rugs and carpets, in fact anywhere about a house or school. It may gain lodgment in the living tissue and lie dormant for years, but it bides its time and like a stealthy

and vigilant foe without, strikes when the body is weakened from exposure or disease, and woe to the man who neglects the cough because there is no consumption in his family. Thousands of lives are lost every year due to this one fallacy. The medical profession is laying less and less stress on the inherited character of tuberculosis, and I for one have serious doubts about its being hereditary at all in the true sense of that word. The insurance companies are more likely to reject one who has recently lived with a consumptive than one whose parents have died from that disease. In other words, the profession is beginning to recognize the highly infective nature of the disease and minimizing the inherited character of it. In all cases where a hereditary history seems so strong, if the conditions are studied closely it can all be explained by the infective nature of the disease and the tendency to lie dormant for a long time and then spring into activity at a favorable opportunity. It is a very reasonable conclusion that one member of a family acquires the disease and it is transmitted through carelessness from one member to the other until the whole family succumbs to its ravages.

After learning that tuberculosis is an infectious rather than a hereditary disease and that sunshine and fresh air are Nature's great destroyers of it and that bad air, darkness, dampness and dust are the breeding grounds of the germ and also that a healthy body is able to and does destroy the germs when taken into it, we are in a position to prescribe both the prevention and the cure of the disease.

It will now be readily seen what a tremendous power the public schools would be, should they take up the physical training and education as suggested, in the prevention of tuberculosis. There is no one thing that would do more to prevent tuberculosis than the outdoor gymnasia or playgrounds. These would give abundant and wholesome games, exercises, fresh air and sunshine. The next greatest factor would be the medical examination to detect and remove any defect that may prevent the development of a strong body, and also the detection of the disease itself in the early stages so that the cure of the disease is made possible. Proper isolation of the patient could be then secured for the protection of others and the patient would have a much greater chance of recovery. Without this medical examination a pupil with an apparent cold may be allowed to remain in school until it had infected a whole roomful of pupils with tuberculosis.

Physical classification would remove pupils from the school whose condition demands active treatment and would place others in a class to themselves where they would be cared for as their condition suggested. The cold storage room with all the windows open, the open air school, the

prepared lunch for those whose low state of vitality demanded it, the visits to their homes to secure the cooperation of parents in regard to home conditions, all make it possible to keep them in school without sacrificing their chance of recovery or endangering the lives of others.

The pupils would be instructed about the danger of spitting. The microscope would be used to show them what it contains, and cultures of the germs could be made in order to impress the lesson more clearly.

They would be taught the danger of dry sweeping by which dust filled with germs is sent flying into the air and which someone is compelled to breathe. They would be shown the advantages of the vacuum cleaner and the moist mop.

They would learn that the common fly can carry tuberculosis and many other diseases. It is still a common sight to see a child asleep with its face full of flies feeding from its mouth and nose. The fly is still allowed in many of the poorer homes to wander over the food on the table by the hundreds.

It would be explained that an unclean mouth full of decaying teeth and food is the very best of places to grow germs that may and do often result in death, and that periodic visits to the dentist is an economic procedure. They would be taught to abhor a filthy mouth more than a filthy collar. It is safe to say that one-half of the people give their teeth and mouth no thought at all until there is excruciating pain.

They would be taught more fully the danger of soiled hands, soiled handkerchiefs, towels and also the common drinking-cup and fountain.

The children and parents would learn to rely more on good food and abundant clothing and not through carelessness or foolish pride, exhaust their physical bank account in early life and spend the rest of their days with the balance on the wrong side of the ledger.

They would not only become imbued with these common ideas of hygiene, but would resort to many things that now are left to the doctor. In all suspicious cases they would have sputum examinations made early and often. This would detect the presence of the disease in many cases, even before the doctor had been called into the case. The state of Missouri is making these examinations free of cost to the people now, but few are taking advantage of it. There is no reason it could not be done in the laboratory of every high school in the state. They would also resort to the tuberculin test of the eye known as the Calmette test. All of these would lead to an early diagnosis and an early diagnosis means life, a late one means death.

Those who would be compelled to live with or nurse a consumptive would know how to protect themselves and others also. They would never under any circumstances sleep with a consumptive or sleep in the same room if it could pos-

sibly be avoided. Every child would be a living placard saying "I will not give consumption to others and I will not let others give it to me." With these conditions prevailing soon every house would contain its out-door sleeping-quarters and the state would be compelled to build adequate sanatoriums to accommodate the sufferers from tuberculosis, who at the present time are dying for the want of them. Missouri has five hospitals for the mentally deranged and one small institution for consumption.

Now let me give you in as brief a manner as possible the results of one month's work in an out-door school. The building was a large shelter tent with thirty reclining chairs or cots. There were thirty pupils, two teachers, one nurse on half time; the nurse took temperatures, pulse and general condition of the pupils and kept an accurate record of each. She also went to their homes to consult the parents and secure their cooperation in all things. They were given three lunches at school each day. The time was divided between school, sleeping and playing. Of the thirty pupils, seventeen had tuberculosis. All of them had been exposed to it. Twenty of them had temperatures ranging from 99 to 100.2. At the end of the month only two showed any temperature and that was 99. The whole class had made an average gain in weight of almost 4 pounds. Besides this gain in health they had made greater gains than usual in their studies. This school was repeated in the winter time with the tent on the top of a five-story building with the temperature part of the time at zero. The results were equally as good. The children came from the poorer sections of the city. Here is an average family history of one of these pupils: The father was a laboring man with incipient tuberculosis. There were eight children and a mother. One of the children had tuberculosis; the income was \$13 a week and all living in a small four-room house. What is the outlook for such a family and what must be the final result if the state does not come to the rescue? There could be but one—the whole family infected.

A state that spends \$1,200,000 a year in educating children that die before they reach 20 years of age may well pause to consider the money value of preventive work. What this plan of education would do to prevent tuberculosis would be a fair example of what it would do for all other diseases.

The cure of tuberculosis is soon told. Go to a sanatorium or an out-door sleeping-room, remain in bed day and night, in the open air until long after all temperature has disappeared. Take as much rich and nourishing food as the body will assimilate. Take no drugs, except to assist the stomach in the work of digestion. Leave the bed only on the advice of a competent physician and follow his advice after leaving it.



To sum up:

1. Thousands of children lose their lives every year from preventable causes.

2. If the state would give the same care to the physical development and education of the child that it does to the mind, a large part of these lives would be saved. Greater progress would be made in intellectual work and a higher type of citizen would be developed.

3. It would be a success from an economic standpoint because the state spends more money to educate children who die before they reach maturity than it would cost to put this idea of physical direction and education into effect.

4. It would be the best means of combating tuberculosis, the greatest scourge of the human race, and in time may totally exterminate or eradicate it.

And I may add a fifth: It would teach us that we have our physical destiny in our own hands and as a result we would avoid that excessive fear of disease and death on the one hand and indifference of the same on the other. These two extremes have been tersely expressed, the first by one who, seeing germs to the left of him, germs to the right of him, declared that it "was a very dangerous thing to be alive," and the second by another who said: "Consumption comes with a hack and a cough and goes with a coffin and a hack," and passed serenely on, possibly to contract the disease himself.

But, being taught that *we* are the *architects* of our physical being, we would be urged on by the noblest of all ambitions to

Build thee more stately mansions, O! my soul,  
While the swift seasons roll.  
Leave thy low vaulted past,  
Let each temple, nobler than the last  
Shut thee from Heaven with a dome more vast,  
'Till thou at length art free.

#### SOME INTERESTING CASES OF RUPTURED EXTRA-UTERINE PREGNANCY \*

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There are few conditions presenting a more alarming picture and demanding more judgment than a case of ruptured ectopic pregnancy.

Extra-uterine pregnancies are classified either as ovarian or tubal, it being practically conceded that abdominal ectopic pregnancy does not exist. Ovarian pregnancy is of rare occurrence. The tubal variety furnishes most of the cases. Tubal pregnancies are classified, according to the location of the impregnated ovum in the tube, as ampullar, isthmic and interstitial.

The cause of tubal gestation is nearly always of a mechanical nature. Most frequently a perisalpingitis or an endosalpingitis produces a kink,

or in some manner causes an obstruction to the tube, which in some way interferes with the descent of the ovum. A diagnosis of tubal pregnancy before rupture is not always an easy matter—in fact, sometimes quite impossible. Frequently the history reveals a previous pelvic trouble, often a period of sterility of several years since last birth. As a rule one or more menstrual periods have been missed. Often there is a stormy period since pregnancy occurred; all the subjective symptoms of pregnancy may be found. Pain in the pelvis is complained of. Vaginal examination shows discoloration of the vaginal mucous membrane; the cervix is soft, uterus enlarged and to the side of it is outlined a small, soft mass. With these symptoms one would strongly suspect ectopic pregnancy. The most frequent conditions to exclude would be pyosalpinx, appendicitis and tumors, any of which may be a complicating feature. In pyosalpinx the subjective symptoms of pregnancy are wanting; they are usually bilateral and at some time or other have given rise to fever and other acute symptoms. In appendicitis the trouble is most often localized at or around McBurney's point. In case of tumor the differential diagnosis might not be so easy; since, however, each of these conditions would require surgical attention, no mistake would be made in the treatment.

After rupture has occurred the diagnosis as a rule is not so difficult. No one who has seen the picture of a woman in profound shock from hemorrhage following a ruptured extra-uterine pregnancy can ever forget the tragic picture. The anxious expression, pallor-pale lips, the air hunger and rapid respiration, make an impression not readily put aside. A young married woman, usually having had previous pelvic disease, having missed one or more menstrual periods, after some slight overtax, is suddenly seized with an agonizing, knife-like pain in the side and soon falls in a faint; collapse ensues from pain and the loss of blood. In this state she is usually found by some member of the family and carried to her bed. After a time she regains consciousness and when the physician arrives, the above history, with the finding of a very rapid pulse, pallor and extreme restlessness and abdominal tenderness, leads him to suspect the correct diagnosis. However, if a delay of several days occurs after the rupture, before she is seen by the physician, the diagnosis may be more difficult. She now may have a slight flow, perhaps some membrane has been passed and she may have cramps; the hemorrhage in the tube has ceased, slight fever may be present and the physician may agree with her in thinking that she is merely aborting. A vaginal examination, which should be undertaken with extreme care lest the hemorrhage be again provoked, may render the diagnosis at once clear.

In the past eighteen months I have encountered six cases of ruptured tubal pregnancy.

\* Read before the St. Louis Medical Society, Section on Obstetrics and Diseases of Women, Oct. 24, 1911.

Four of these cases presented unusual complicating features, one case was probably an interstitial rupture. The extremely dangerous condition of this patient precluded any search for a fetus or tissue to show chorionic villi. However, a fairly definite history of an ectopic pregnancy was elicited and a large hole in the uterus at the insertion of the tube, together with a mass in the torn tube was present. The abdomen was filled with blood and hemorrhage was active. The operation was done in the country and I thought the patient would not survive the operation. A ligature was quickly sewn around the uterine tear and one distal to the rupture in the tube; abdomen was closed with drainage; a normal salt solution at once begun. Dr. Isbell, of Washington, Mo., who called me, reports that she entirely recovered.

The following case gives a rather classical history, which I will briefly relate:

Mrs. S., 32 years of age, married thirteen years. One child, 12 years of age. Not pregnant in last twelve years. Never regular in her menstruation. Last menstruation April 20, 1911. Slight, bloody discharge in May and on June 24 slight, bloody discharge for two days. On July 1 while sitting quietly on front porch, she was suddenly seized with stab-like pain in right side. Feeling as though the bowels should move, she went to the toilet where she became so weak she had to be assisted to her bed. Pain continued until July 4 when on some slight exertion she fainted. She was under the care of Dr. A. W. Peters until I saw her with him on July 19 about 7 p. m. About 4 p. m. on this date, after climbing the stairs to the second floor, she was again seized with sudden pain in side; she fell over on the bed in a faint, rapidly becoming very weak. The diagnosis was at once suspected from her appearance; bimanual examination confirmed the suspicions. She was immediately sent to St. Anthony's Hospital where I opened the abdomen, which was filled with fluid and clotted blood. Right tube was ruptured and an 8 to 10 week fetus was found free in the abdomen. Tube rapidly removed. Blood gently mopped out from abdominal cavity. Recovery was uneventful.

The remaining four cases all presented some complicating features. The complicating condition was not suspected in all of them until operation. In the other cases, while the complicating features were not positively diagnosed, yet they were strongly suspected before operation.

Mrs. B. came to my service at the Alexian Brothers Free Dispensary in August of this year, complaining of pelvic trouble of several years' standing. Married ten years; 32 years of age. Has never been pregnant. She was curetted one year ago, the indication for which was very indefinite. She has had several attacks of pain in the right side around McBurney's point which lasted only a few days. She complains of indigestion and is greatly disturbed with sour eructation of gas. In July of this year she went over her menstrual period three weeks at which time she thought she had miscarried. She had severe cramps for two days and lost much clotted blood. August 15 she again menstruated, flow lasting the usual number of days. Since then constant pain in right side, not severe but continued. Examination revealed great tenderness in right pelvis. On vaginal examination the cervix was hard, pointing downward. Uterus slightly enlarged and firm; left adnexa normal. On the right side a mass the size of an orange could be palpated which moved with the

uterus. The mass was hard and of smooth outline. Positive diagnosis was not made. A few days later she was sent to St. Anthony's Hospital where on August 29 I opened the abdomen and found a mass in the right broad ligament adherent to the uterus. It was removed and found to be filled with clotted blood; an extremely small ovum was discovered in the mass. The appendix was embedded in a mass of firm adhesions. The lumen of the lower end was completely obliterated. Recovery was uneventful.

Mrs. Z., 28 years of age, married eight years ago, no children, but has had four miscarriages. She has had pelvic trouble for more than five years, having had several attacks of probably acute salpingitis, which confined her to her bed for several days at a time with great pain and high fever. For the past year she was under the care of Dr. A. W. Peters, who referred her to me on account of her present condition. She had missed two menstrual periods, and two weeks following the time of her last period, after slight exertion, she was suddenly seized with a severe knife-like pain in her right side. She rapidly became very weak and took to her bed. A few hours later, the pain not having subsided, she sent for her physician who found her with the following symptoms: Pulse 110, small and regular, temperature normal, very tender abdomen and considerable pain. She was ordered to stay in bed and keep absolutely quiet and was given morphine hypodermically. Several hours later, cramps low down in the abdomen began and continued for about three days, at which time some tissue resembling lining of the uterus was passed. For a time she was much relieved. Soon, however, the cramps recurred and the pain again became very severe. The temperature was now 101, pulse 110. There was a thick bloody discharge. She was sent to St. Anthony's Hospital where I first saw her in the above condition. It was not possible to make a satisfactory vaginal examination on account of extreme tenderness. However a mass could be distinctly felt to the right of the uterus and there was still some bloody discharge. She was still having cramps, seemingly uterine in character. She was prepared for operation and bimanual examination under ether convinced us of the presence of the large soft mass. I opened the abdomen and much blood was found free in the peritoneum. A large mass filled with clotted blood and a two months' fetus was removed and all hemorrhage carefully checked. On the opposite side there was pyosalpinx, which was also removed. The abdomen was closed, a rubber tissue drain was left in abdomen which was brought out through a stab wound. This was removed after thirty-six hours. She made an uneventful recovery, leaving the hospital eighteen days following the operation.

The history of the second case is quite as interesting as the first and shows the difficulty in making a diagnosis under conditions somewhat unusual.

Mrs. G., 25 years of age, married eighteen months. She was referred to me by Dr. R. S. Vitt. She has had no children and no miscarriages. During the last four years she has had several attacks of appendicitis. She has been in poor health since the first attack and refused operation for her trouble, though strongly urged by her physician to have her appendix removed. Early in May of the present year while washing she was suddenly seized with a severe stab-like pain in the right side; this was so severe that she had to go to bed immediately. She was in great pain the entire night following and grew very weak. In the morning a slight flow began with cramps in the abdomen. She had only missed one menstrual period about a week before the above occurrence and she thought she was having an abortion. She remained in this condition for two or three days before calling a physician. However, the pain in the right side became more severe and she finally called in Dr. Vitt. He found her with a pulse of 104, temperature of 101; she was greatly frightened and very nervous. He was unable to exam-



ine her to any extent on account of pain. There was still a slight bloody discharge. By the next day the pain was more severe and the pulse more rapid. I was called in consultation about 8 p. m., and after obtaining a careful history and examination, decided that it was probably a case of ruptured extra-uterine pregnancy. The abdomen was somewhat distended and there was marked rigidity of the right rectus muscle. The tenderness was pronounced about McBurney's point. On vaginal examination, however, fluid could be plainly detected free in the peritoneal cavity, also a mass could be outlined to the right of the uterus. She was immediately sent to St. Anthony's Hospital. The abdomen was opened by a median incision and a large quantity of clotted and fluid blood was free in the abdomen, most of which was wiped out with dry gauze sponges. In the right broad ligament was a large mass, the size of a coconut filled with clotted blood, tightly adherent to the cecum. This was dissected loose and removed. The appendix was firmly adherent in a mass of inflammatory tissue. It was greatly enlarged and acutely inflamed. The appendix was removed and a rubber tissue drain was brought down to the bottom of the pelvis and brought out through a stab wound. The incision was closed and patient put to bed in the Fowler position on her face to facilitate drainage. The drain was removed in three days, the temperature being normal and the drainage having ceased. She left the hospital at the end of two weeks feeling perfectly well. I saw her several months following the operation and she had gained thirty pounds in weight and has been in better health since the operation than for many years before, showing the probable influence of the diseased appendix on her previous health. What influence the appendix disease may have had in the course of tubal pregnancy, I do not know.

Mrs. P., a hard working housewife, mother of one child. Married four years. Was regular and normal in respect to her menstrual history. At the time of the present trouble, she had been delayed seven or eight weeks and had the subjective symptoms of pregnancy for two weeks, consisting of morning vomiting, nausea and indigestion. On the morning when the rupture occurred, she had walked seven or eight miles in the country, hunting berries. On her return, while nearing home, she was seized with sudden sharp pain in her side; she continued home, arriving there completely exhausted. The pain continued and she was so weak that she was unable to arise from her bed. She sent for the physician who found her suffering with pain low down in the abdomen. Temperature  $99\frac{1}{2}$ , pulse 120. Her bowels had not moved in three days. Rest was advised by him and a dose of castor oil administered. He returned twelve hours later to find that she had had no bowel evacuation. There was considerable distention of the abdomen. He gave an enema with no result. He then suspected bowel obstruction and called me in consultation. Careful history taking, which revealed the missed menstrual period, and the sharp sudden pain followed by signs of hemorrhage described by her together with her appearance led me to suspect the trouble. Vaginal examination revealed a soft mass to the right of the uterus and withdrawing the examining finger slowly one could plainly feel fluid following, pushing the vaginal walls together. Her pulse was now 120, respiration 28, temperature  $100\frac{1}{2}$ . Her lips were pale and nails showed the loss of blood. She was accordingly removed at once to St. Anthony's Hospital, it having been agreed that she had a ruptured ectopic pregnancy. I immediately opened the abdomen which was filled with free blood, the right tube was distended to the size of a baseball and ruptured. On sponging carefully, it was found that active hemorrhage was then going on. The mass was ligated and removed, and all hemorrhage was stopped. In clearing some of the clotted blood from the abdomen, my hand met some hard substance higher up in the abdomen, which was found to be a

gall-stone in the gall-bladder. There was considerable shock and it was deemed unwise to remove the gall-stone then. The abdomen was rapidly closed, the entire operation taking about twelve minutes. Saline solution was given subcutaneously and per rectum by the drop method. She recovered rather slowly, due to the great loss of blood she had sustained. While convalescing a careful history was elicited and it was found that she had been a sufferer from indigestion for three or four years; that she had had several attacks of colic in the region of the gall-bladder and at one time was slightly jaundiced. She was advised to have the stone removed and gall-bladder drained before she left the hospital, which was refused, promising to return for the removal of the stone later. Five weeks after leaving the hospital, she had another attack of colic, with much disturbance to the digestion. She returned to the hospital and I removed a gall-stone the size of a large walnut; drained the gall-bladder. She left the hospital at the end of two weeks entirely well. A report fourteen months later stated she is entirely cured; no indigestion, no pain and much heavier in weight than she had ever been.

In conclusion: It is my firm conviction that every case of ruptured ectopic pregnancy is a surgical case, certainly so if the hemorrhage is actively going on. No one can say when the hemorrhage will cease, or that it will cease at all. Surely no principle of surgery is more firmly established than that hemorrhage should be checked if possible; granted the patient is in extreme shock, the continued loss of blood only adds to the gravity of the case. If the hemorrhage should cease, we have no method of determining that a second hemorrhage will not occur and prove fatal. A simple laparotomy with ligating of the vessels can only take a few minutes and adds very little to the shock already present. It is true that many cases recover under palliative measures, but statistics clearly demonstrate that operation gives by far the greater percentage of recoveries. Shauta collected 123 cases operated on with a mortality of 5.7 per cent., and 121 cases treated palliatively with a mortality of 86.89 per cent. The statistics of A. Martin show a mortality of 63.1 out of 265 cases treated palliatively, and only a mortality of 23.1 per cent. of 515 cases operated on. Jacobs reports a series of 802 cases of intraperitoneal hemorrhage; 615 were operated on during the first hours with the result that 580 recovered; 142 cases operated all from several hours to one or two days with 130 recoveries. Forty-five cases were not operated on, of which twenty lived and twenty-five died. The above figures are quoted by Barrett, who states that his experience is entirely in accord with these writers.

3826 Castleman Avenue.

## REQUIREMENTS OF THE ST. LOUIS PURE MILK COMMISSION FOR CERTIFIED MILK

### PREFACE TO THE SECOND REVISION

When it became known that the bacterial contamination of cow's milk rendered it dangerous and in a measure unfit for infant use, the difficul-

ties encountered in attempting to secure wholesome milk reasonably free from bacteria were almost insurmountable. It was in the face of this serious predicament that Dr. Henry L. Coit of Newark, N. J., conceived the plan of cooperation among physicians for the production and control of a milk suitable for infants and persons in delicate condition. It was not long before the wisdom and need of such cooperation became generally recognized, and bodies of medical men, determined on the procuring of pure milk, were formed in various parts of the country; these bodies were designated medical milk commissions, and their purpose was to encourage and oversee the production of pure, clean milk through which a reduction in the morbidity and mortality of infants might be brought about.

It is now generally known that this plan has been successful and that "certified milk" is purchasable in all important cities and in many smaller cities in this country. In every case the production of certified milk is intimately under the supervision of a commission composed of medical men, and the various commissions are united into a national association known as the American Association of Medical Milk Commissions, which convenes yearly, and publishes a booklet of its proceedings in which may be found much of the news relating to certified milk production. This booklet contains reports from the commissions and papers on allied subjects; it can be obtained by any one interested by addressing the secretary, Dr. Otto P. Geier, 124 Garfield Place, Cincinnati, Ohio.

The St. Louis Pure Milk Commission was one of the earliest medical milk commissions to be organized in this country and has completed eight years of active and successful work. It joined the national association in 1907 and has been regularly represented at its yearly conventions.

In retrospect it is a pleasure to record here the debt in which the St. Louis Pure Milk Commission stands to Dr. Walter Bernays, to whose activity while city chemist for St. Louis the successful beginning of the movement here was most largely due. The requirements for certified milk as here set forth are, with a few minor alterations, just as he compiled them at that time.

The Commission offers to dairymen complying with these requirements the use of caps on their milk bottles bearing the words "Certified by the St. Louis Pure Milk Commission," and also the privilege of distributing copies of these requirements as advertising matter.

The sole right to the term "certified milk" is held by this Commission for the city of St. Louis. Any infringement of this right will be vigorously prosecuted and the offenders brought to justice.

The Committee on Certification represents the Commission and is responsible to the Commission for the supervision of certified dairies as well as for the transportation and distribution of cer-

tified milk. All communications relative to certification should be addressed to the secretary of this committee.

#### REQUIREMENTS OF THE ST. LOUIS PURE MILK COMMISSION FOR CERTIFIED MILK

THE FOLLOWING AGREEMENT made this — day of —, 191—, between the St. Louis Pure Milk Commission, a corporation organized under the laws of the state of Missouri, party of the first part, and — of —, party of the second part:

WITNESSETH AS FOLLOWS: The party of the second part doth hereby bind himself to a fulfillment of the provisions of this contract for and in consideration of the benefits hereinafter named and granted by the party of the first part.

FIRST: The party of the second part doth hereby agree to conduct such parts of his dairy as may be hereinafter named, collect and handle its products in conformity with the requirements below set forth, for and in consideration of the promised endorsement of the parties of the first part, as hereinafter indicated. The milk thus produced shall be known as "certified milk" and shall be designed especially for clinical purposes. When at any time the demand for certified milk shall be greater than the supply and it is prescribed by a physician, either for infant feeding or the diet of the sick, it is hereby agreed that such patient shall be the preferred purchaser.

SECOND: The party of the second part doth hereby agree that all milk sold by him and which shall be known as "certified milk" shall come from his own dairy only, and shall comply with the requirements of the party of the first part.

THIRD: The Commission shall select a bacteriologist, a chemist and a consulting veterinarian. The bacteriologist shall procure a specimen of milk from the dairy or preferably from delivery wagons or from any place or at any time while this milk is offered for sale as certified milk, at intervals to be determined by the Commission, but in no case at a longer interval than one month. The exact time of procuring samples shall be without previous notice to the dairy. He shall test this milk for the number and nature of microorganisms present in it, to the extent which the needs of safe milk demand. Milk free from evidence of a diseased udder and microorganisms injurious to health and containing less than 30,000 microorganisms of any kind, when delivered to the consumer, shall be considered to be up to the required biologic standard of purity.

FOURTH: The chemist shall in similar manner procure samples of this milk, he shall take its temperature and examine it for the percentages of fat and total solids, determine its acidity and the amount of foreign insoluble matter and its specific gravity. He shall further examine it for chemicals added as preservatives or for any other purpose. Whenever the Certification Committee



deems it advisable he shall also determine the percentages of protein, sugar and mineral matter.

Standard milk shall range from 1,030 to 1,034 (water 1,000) in specific gravity, be amphoteric or very faintly acid in reaction, contain from 3 per cent. to 4 per cent. protein, from 4 per cent. to 5 per cent. sugar, from 3.25 per cent. to 4.5 per cent. fat, and shall be free from all contaminating substances or matter and from all additions of chemical compounds or coloring matters, and the sum of the non-fatty constituents shall be not less than 8.6 per cent. Milk shall not have been subjected to heat before examination has been made nor at any time.

**FIFTH:** A member of the Certification Committee by himself or in consultation with any or all of the Commission's experts or in company with other members of the Certification Committee, shall at some time during each month and without previous warning to the dairyman, inspect the cleanliness of the dairy in general, the care and cleanliness observed in milking, the care of the various utensils employed, the nature and quality of the food used and all other matters of hygienic nature bearing on the health of the cows and the cleanliness of the milk, including also as far as possible an inquiry into the health of the employees on the dairy-farm. In a word, he shall observe whether or not each detail pertaining to certification exists and is in force at the dairy and shall report same to the Certification Committee at its next monthly meeting or at any meeting which may be called by the chairman of this committee. He shall also see that the cows are free from tuberculosis or other disease, and no animal shall be admitted to the herd until after a quarantine period of two weeks and until after being subjected to the tuberculin test and until approved by the Commission's veterinary experts. The inspector is also expected to report on the icing of the crates as they arrive in St. Louis from the dairy which he has visited: at least one such examination to be made during the month of his visit to the dairy.

**SIXTH:** In case an examination shows the dairy and its products not in compliance with the requirements and standards of excellence set forth in this contract, the dairy may have a re-examination made within a week or within a short time, at the discretion of the Commission.

**SEVENTH:** It is agreed that the requirements and standards with which the party of the second part does hereby agree to comply and attain, in connection with the operation of his dairy or dairies, from which his milk-supply shall be obtained, shall be as follows:

**Location of Dairy.**—Buildings should be placed on sufficiently high ground to ensure good drainage and where plenty of pure water is available. If possible, roads to pastures should be covered with a hard surface of cinders or gravel. Pastures shall contain no surface water. No animals

other than cows shall be kept within 40 yards of the dairy buildings.

**Water-Supply.**—The water-supply must be shown by test to be pure, it must be abundant and amply protected from danger of pollution and further examinations will be made as are deemed advisable by the Certification Committee without expense to the producer.

**Barn-Yard.**—The barn-yard must be made to slope away from the buildings so that surface water will drain off rapidly. It shall be covered with a layer of concrete or other hard material approved by the Commission. No manure or rubbish shall be allowed to accumulate in the barn-yard.

**Stable.**—The stable must have an efficient system of drainage and ventilation. It must be well lighted. Sufficient artificial light must be provided to do the work properly during dark hours. The roof must not leak and the sides must be wind-tight. Doors and windows must close tightly. Floor, gutter and manger must be of non-absorbent material, preferably cement. The platform on which the cows stand may be covered with creosoted wood if cement be deemed too hard. Floors and gutters must have sufficient slope to drain well. If there is a loft over the milking-stable, said stable must have a dust-proof ceiling. Running water and wash basins must be provided in the barn or in an adjacent room. The length of the stalls must be adjustable or the platform must taper from one end of the barn to the other, so that cows of different size may be lined up so that their manure will fall directly into the gutter and so that they will not habitually stand with their feet in the manure gutter. Some effective means of keeping the cows lined up on the gutter must be adopted. The entire floor must be thoroughly scrubbed with broom and water daily. The walls, ceilings and stalls must be clean and free from dust and cobwebs, and if not painted they must be white-washed at least twice a year or oftener if the Committee considers it necessary. Manure must be removed from the stable twice a day when the cows are kept in. The mangers must be constructed of non-absorbent material and so designed as to have no corners where decaying particles of feed may lodge. Bedding must be kept clean and as free from dust as possible. Anything which decays rapidly must not be used for bedding. Hay must not be used for bedding. There must be an isolation and hospital barn on the premises at least 100 yards from the main barn. New animals must be kept separate from the herd until approved by the veterinary. Every animal must be shown to be free from tuberculosis by test of the Commission's veterinary or of a veterinary approved by him before it enters the herd, and tuberculin tests shall be made in the following manner: If the cows are properly subjected to the tuberculin test on admittance to

the herd and at the expiration of three months again tested they need not be isolated; provided, however, that if a reaction occurs at the second test the entire herd must be at once given the tuberculin test.

The entire herd must be tuberculin tested at least once each year and if a reaction occurs in any cow of the herd the entire herd must again be tuberculin tested within the following six months.

Milk from sick animals must be discarded, and such animals isolated until readmitted by a competent veterinary. Pregnant cows must be removed from the milking-barn from thirty to forty-five days before calving and not returned to the milking-barn sooner than the ninth day after calving. Milk from cows in heat shall not be sold as certified milk.

*Feeding.*—Nothing in a state of fermentation or decomposition shall be fed. This shall not exclude good ensilage fed in proper quantities at the proper time, i. e., after milking. If ensilage is fed the quantity fed at one time should be so regulated that the entire ration is consumed at once. If fed in the barn the remnants of ensilage left in the manger or on the floor after feeding must be removed immediately. If the privilege of feeding ensilage is abused, the Commission reserves the right to stop its use altogether. Dry roughage must not be fed just before or during milking because this raises dust. No foodstuffs shall be kept or stored in the milking-barn.

*Grooming Cows and Preparation for Milking.*—Each cow must be groomed with curry-comb and stiff brush daily. Hair on the udder and adjacent parts must be kept short. Before each milking, dry dirt and loose hair must be removed from the cow with a stiff brush and places soiled with fresh manure washed. Grooming or any other operation in the barn which raises dust must be begun in time to be finished at least twenty minutes before milking is commenced. After this cleaning the cow must be prevented from lying down until she has been milked, by stretching a chain across the stall under her neck. Milking-stools must be kept clean.

*Milkers and Milking.*—Milkers must not come in contact with any one having a communicable disease; especial attention must be paid to the infectious diseases and to diarrheal diseases, and no employee so affected shall continue milking. In case any disease is found on the premises the case must be reported to the Commission at once and the patient be removed or quarantined in such a way as to satisfy the Commission. Milkers must be personally clean and healthy.

Just before milking commences, the cow's udder and flank must be moistened with a wet cloth and only the teats dried again; one towel must not be used for more than six cows. Milkers should have washable suits and caps which shall be used during milking only and be kept clean;

these suits must be washed twice weekly. Milkers must wash their hands with warm water, soap and nail-brush just before milking, and dry them on a clean towel. All milking must be done with dry hands, and teats must also be dry. Vaseline is, however, allowed if used with discretion. Milk must never be used as a lubricant. Milking should be done quietly and in a thorough manner. Milkers must avoid handling cows more than is necessary during milking. The first few streams from each teat must be discarded. Strange persons, children under 12 and small animals must be excluded from the barn during milking. An effective method of keeping the barn free from insects must be practiced. If an animal yields any milk which is unnatural in appearance (bloody, slimy, etc.), all the milk from that animal must be rejected. Also, if an accident occurs because of which dirt gets into the milk, the entire contents of that pail must be discarded. In either case, the pail must not be used again until it has been cleaned and sterilized. The opening in the milking-pail must not exceed 8 inches. Each pail must be removed from the barn as soon as it is full of milk. The Freeman or Gurler type of pail is recommended. Cows must always be treated with the utmost kindness.

*Milk-House.*—The milk-house must contain one room which is used only for preparing milk for the market. Utensils must be washed in another room which must be equipped with a steam sterilizing chamber large enough to contain at one time all the utensils which come in contact with the milk from the time it leaves the cow until the bottles are sealed. All utensils shall be sterilized in this chamber at not less than 212° F., for an uninterrupted period of one hour. It is, however, permissible and is considered desirable to use superheated steam under pressure, and if pressure of 8 pounds is obtainable, sterilization can be completed in twenty minutes. The milk-room must also contain an efficient cooler and arrangements for bottling. The bottling-room where the milk is exposed should be so situated that the doors can be entirely closed and not opened to admit the milk or to take out the filled bottles while bottling is going on. There shall be no apparatus for pasteurizing milk on the premises. All windows and all door-ways of the milk-house must be securely screened so as to absolutely prevent the entrance of flies into it.

*Milk Utensils.*—In so far as is possible dairy utensils shall be made of metal or glass and shall be of simple construction so as to be easily cleaned; joints and rims of metal utensils shall be smooth and cracks entirely filled with solder. No milk vessels shall be used which are old, rusty or dilapidated. Vessels used for carrying milk shall be used for nothing else. No milk vessels or utensils except pails shall be taken into the stable or milking-barn. All utensils must be cleaned in a separate wash-room especially fitted



for the purpose, and not in dwelling-houses or in milk-room. Before cleaning, milk utensils shall be rinsed with cold or luke-warm water, they shall then be washed thoroughly with hot water with the aid of some cleaning preparation (other than laundry soap or inferior washing-powder) then rinsed with clean water and sterilized, after each milking. Every part of an article, outer as well as inner surfaces, must be cleaned with a brush or be in plain view when cleaned. After cleaning, vessels shall be kept inverted without covers, in a clean, dry, dustless and odorless atmosphere. Cleaning cloths must be washed and sterilized daily. Sponges shall not be used for cleaning.

*Preparing Milk for Shipment.*—The milk must be poured over the cooler immediately after milking, and cooled to 40° F. or less within ten minutes after leaving the cow's udder. It must then be bottled at once and kept in a refrigerator at 45° F. or less until shipped. Bottles must be closed with sterilized caps stamped with the day of milking. During transit and until the milk is delivered at the consumer's house, the bottles must be packed in ice in clean crates so that the temperature is never allowed to rise above 45° F.

*Care and Delivery of Milk and Cream.*—While awaiting delivery in the city, milk must be held in a clean room not used for domestic purposes. Delivery wagons must be so constructed as to protect milk from the weather. All fittings and inside parts must be cleaned frequently; in warm weather they shall be washed daily with warm water. They must be equipped with efficient refrigerators which will keep milk below 45° F. during delivery. The collection of empty bottles and milk tickets or checks from hospitals or houses where infectious disease is known to exist shall be made by other persons and vehicles than those delivering the milk. When returned to the dairy, the bottles shall be taken to a separate room and thoroughly sterilized before being carried to the dairy room, and all collected tickets and checks shall be promptly destroyed. All tickets, checks, labels and caps on jars or bottles must be new when delivered to consumers, and none shall be used a second time.

*Standards.*—Milk certified by this Commission shall have the following composition: fat, 3.25 per cent. to 4.5 per cent.; protein, 3 per cent. to 4 per cent.; sugar, 4 per cent. to 5 per cent. It shall have a specific gravity of 1.030 to 1.034 (water 1,000). It shall be free from all foreign substances and shall not have been subjected to any heating process to reduce the number of microorganisms. It shall contain less than 30,000 microorganisms per cubic centimeter when delivered to the consumer, be altogether free from pathogenic forms of microorganisms and indications of a diseased udder.

Cream intended for modification of milk shall contain a definite percentage of fat, which shall not vary more than 2 per cent. from that stated

on the label or cap. It shall only be very faintly acid, free from foreign additions, free from indications of a diseased udder and pathogenic microorganisms and shall not contain more than 30,000 microorganisms of any kind per cubic centimeter.

*General Requirements.*—Every facility shall be offered at all times to the members of the Commission or its experts for making inspections of dairies. All inspections shall be made without previous notice.

It is obvious that these requirements can only be fulfilled by farmers or dairymen who have their own dairies, so that everything shall be under their direct control. We will, however, permit the dairy farmer to distribute his milk to customers through an agent in the city, provided such agent makes a contract with this Commission which will ensure his furnishing only "certified milk" to customers who order such milk. The agent's contract shall also embody requirements for the manner of storing, transporting and distributing certified milk, so as to safeguard the continued purity and cleanliness of this milk.

If the milk or cream is found up to the standard and other requirements are met, the producer will receive a certificate as follows:

#### ST. LOUIS PURE MILK COMMISSION

*To Whom It May Concern:* Date \_\_\_\_\_

The veterinary inspector of this Commission has examined the dairy of \_\_\_\_\_ and reports it to be in excellent sanitary condition, and employees and cows healthy.

The bacteriologist reports the milk and cream of said dairy free from microorganisms within the limits of the standards of the Commission.

The chemist reports that the milk or cream is of the standard composition and that he has discovered no impurities, preservatives, coloring matters, thickeners or other foreign substances.

The Commission certifies to these statements of the examiners, it being understood, however, that this certificate is good for only one month from date.

[SEAL OF COMMISSION.]

The producer furthermore engages to use exclusively the caps for his milk bottles furnished him by the Commission, and to use no other caps whatsoever for closing his bottles.

**EIGHTH:** No later than the 10th day of each month the party of the second part agrees to file with the secretary of the Commission a statement of the quantity of milk sold during the next preceding month and pay to him 1 per cent. of the retail price of same. The party of the second part agrees that his books shall be accessible to an auditing committee of the party of the first part at all times.

From the proceeds of this sum the Commission agrees to defray the expenses incidental to supervising and controlling the production of this high grade of milk. Tuberculin tests will be made at

the expense of the producer. If, at the end of the year, a balance is left after defraying the expenses of certification, such a balance shall be used to dispense pure milk to the poor or otherwise used at the discretion of the Certification Committee.

**NINTH:** The Commission agrees that none of its members shall receive any compensation for their work. The Commission further agrees that no member of its board of directors or of its certification or executive committees and none of its experts shall be financially connected with any dairy selling milk in the city of St. Louis or its suburbs.

**TENTH:** It is further agreed by the party of the second part that should he fail to comply with any of the terms and conditions of this agreement, or the requirements as herein above set forth, the party of the first part shall have the right and privilege to withdraw its endorsements as to the quality of the milk and cream so sold or produced by the party of the second part. In the event of the party of the first part withdrawing its recommendation, the party of the second part agrees not to use any of the certificates or bottle-



caps that may be in his possession and acquired by him of the party of the first part with the purpose or object in view of having his customers believe that he has met all the requirements and complied with the terms of this agreement, nor will he display the term "certified milk" on bottles, crates, wagons, stationery or in any other way.

**ELEVENTH:** It is further agreed that should the party of the second part violate this agreement and use without authority from the party of the first part any certificates or bottle-caps as herein described, that he will pay to the party of the first part as liquidated damages the sum of \$50 for every bottle-cap or certificate so used. The party of the first part shall have the right at any time, should it so determine, that the party of the second part has failed to comply with this agreement or any of its requirements as above set forth, to withdraw its recommendations and approval, as to the quality of milk or cream so sold or furnished by the party of the second part.

**TWELFTH:** It is furthermore understood and agreed that nothing in this contract shall prevent the abrogation of any of the provisions of

the same by the party of the first part, provided that it shall be done for the purpose of substituting other provisions designed to promote the objects of this organization.

**THIRTEENTH:** It is furthermore understood and agreed by and between the parties hereto that the party of the second part shall be at liberty to cancel this agreement by giving one month's notice in writing of his desire to do so, in case of disability for any reason to comply with terms of the same. And in said event, the party of the second part agrees not to use any of the certificates or bottle-caps in any way in the conduct of his business, that may have been issued and delivered to him by the party of the first part; and should it be discovered that the party of the second part has used said certificates or bottle-caps in any way, the party of the second part agrees to pay to the party of the first part as liquidated damages the sum of \$50 for every violation of this part of the agreement.

IN WITNESS WHEREOF, the St. Louis Pure Milk Commission has caused these presents to be signed by its president, its corporate seal attached and attested by its secretary, and the party of the second part has also attached his signature, the day and year above written.

ST. LOUIS PURE MILK COMMISSION,

by ———, President.

Attest. ———, Secretary.

THE MILK-SUPPLY OF COLUMBIA, MO.\*

HERMAN H. VAN HORN, B.A.

NEW ORLEANS

During the period from June 10 to Sept. 15, 1911, the writer made in the laboratory of the Dairy Department of the University of Missouri under the general supervision of Prof. C. H. Eckles a study of the milk-supply of Columbia, Mo. The rough notes of that investigation have been worked up in the Laboratory of Hygiene and Preventive Medicine in Tulane University under the direction of Prof. Creighton Wellman, to whom the author would express his indebtedness for help and advice in the preparation of the present paper.

The primary object of the work was to determine the exact condition of the supply from a sanitary and modern point of view; but also the author is not without hope that by data determined and actual contact with producers and consumers, some impetus may be given to a practical improvement of conditions.

Seven dairies or dairy companies were found selling milk as the main supply of the city. It will be convenient to speak of these dairies as A, B, C, D, E, F and G.

\* Studies from the Laboratory of Tropical Medicine, Hygiene and Preventive Medicine, under the direction of Creighton Wellman, Medical Department, Tulane University of Louisiana, No. 8.



In this report are outlined four separate lines of study: (1) laboratory study, (2) study of delivery wagons, etc., (3) use of the various milks for food, and (4) visiting of dairies and seoring. The methods and results of each study are given in order.

#### I. LABORATORY STUDY

Samples in all cases but one were taken in quart bottles. If the milk was not taken in a bottle from the wagon, as was usually the case, it was put into a sterilized quart bottle furnished by the author. In the one exception a half-pint bottle was obtained. Samples were hurried to the laboratory shortly after delivery in the morning, and there placed at once in cold running water until the glass-ware was ready for plating. There was obtained for each sample the specific gravity, butter-fat by the Babcock test, total solids, solids not fat, total acidity, sedi-

supernatant fluid was again poured off down to 0.5 c.c. and a drop of this residue after it had been thoroughly shaken was counted by the usual blood-counter. The sediment was considered each time from the result of the centrifugalization. The tabulated results of this work are here given.

One of the things most noticeable in this table is the relatively high bacterial counts of milks of "A" and "C." The low leukocyte count of dairy "F" was noticeable. The butter-fat of Dairy "A" never went above 4 per cent. in seven samples. All milk was generally free from marked sediment. We should remember, however, that this was a dry and summer season. The bacteria of "A" and "C" showed many gelatin liquefiers. The sample of Dairy "D" giving 1,260,000 bacteria showed a plate of a markedly pure culture of *B. acidi lactici*. The sample of Dairy "C,"

Dairy	Date, 1911	Source	Specific Gravity	Fat	Total Solids	Solids Not Fat	Total Acidity Per Cent.	Sedi-ment	Leukocytes per c.c.	Bacteria per c.c.
A	June 10...	Bottle shop...	1.034	3.6	12.8	9.2	...	...	160,000	4,400,000
A	June 23...	Bottle route 1...	1.032	3.8	12.56	8.76	.153	...	200,000	6,500,000
A	June 29...	Route 2	1.033	3.8	12.76	8.96	.137	...	248,000	3,400,000
A	July 8...	Route 2	1.033	4.0	13.00	9.00	.144	...	280,000	240,000
A	July 23...	Route 1	1.032	3.8	12.56	8.76	.132	Fly	416,000	750,000
A	July 25...	Route 2	1.033	4.0	13.00	9.00	.141	...	290,000	114,000
A	August 7...	Route 1	1.030	3.7	11.94	8.24	.129	...	672,000	2,700,000
B	June 19...	Bottle wagon	1.033	3.7	12.6	8.9	.145	...	165,000	150,000
B	August 2...	Bottle	1.032	4.4	13.28	8.88	.126	...	242,000	96,000
B	August 18...	Bottle	1.031	3.6	12.00	8.4	.135	...	240,000	450,000
C	July 7...	Bottle	1.032	3.8	12.56	8.76	.141	...	296,000	390,000
C	July 15...	Bottle	1.032	4.6	13.52	8.92	.146	...	272,000	4,600,000
C	July 24...	Bottle	1.033	3.7	12.64	8.94	.141	...	328,000	1,560,000
C	August 28...	Bottle	1.032	4.0	12.8	8.8	.133	...	192,000	4,620,000
D	July 29...	Bottle	1.033	5.0	14.2	9.2	.134	...	312,000	1,260,000
D	August 12...	Bottle	1.030	4.5	13.1	8.6	.133	...	328,000	420,000
E	June 21...	Bottle	1.031	4.8	13.46	8.6	.137	...	220,000	3,100,000
E	July 27...	Bottle	1.032	5.5	14.6	9.1	.144	...	268,000	2,340,000
E	August 12...	Bottle	1.032	4.1	12.82	8.82	.127	...	214,000	310,000
E	August 18...	Bottle	1.031	4.7	13.3	8.64	.143	...	304,000	485,000
F	June 15...	Bottle	1.032	4.6	13.82	9.22	.132	...	140,000	145,000 *
F	August 18...	Bottle	1.031	4.1	12.6	8.5	.135	...	116,000	3,090,000
G	August 28...	From can	1.031	3.8	12.2	8.46	.147	...	272,000	564,000

\* Result doubtful.

ment, number of leukocytes per cubic centimeter, and bacteria per cubic centimeter. For the bacterial growth agar was prepared from directions in Heinemann's Laboratory Guide in Bacteriology (page 11) and adjusted to 0.5 per cent. acid to phenolphthalein. Ten grams of lactose was also added. A sterilized litmus solution was used and a drop or two added to each plate at the time of plating. Gelatin media were also used, prepared as directed in the guide mentioned (page 23). Lactose, 10 grams to a liter, was likewise added to this medium and the reaction adjusted to 0.5 per cent. acid to phenolphthalein. Three dilutions were plated for each sample. The leukocyte count was made by use of the electric sedimentation tube at 2,000 revolutions per minute. All the milk was then poured off except 0.5 c.c. in the bottom which contained all the leukocytes. This was diluted with water up to 10 c.c. and centrifuged again for eight minutes. All the

taken on July 24 and showing 1,560,000 bacteria, was taken on a quite cool day after several days of cool weather. The average count of bacteria per cubic centimeter for twenty-two samples is 1,887,227. It is interesting at this point to quote in comparison: "It is a matter of common knowledge that much of the milk distributed in large cities is too far advanced in bacterial decomposition to be a desirable food. In New York City it was found by Park that during the coldest weather the milk in the shops averaged over 300,000 bacteria per cubic centimeter; during cool weather about 1,000,000; and during hot weather about 5,000,000. In Chicago, Heinemann and the writer found in market-milk collected during April, May and June numbers ranging from 10,000 to 74,000,000; and in Boston, Sedgwick and Batchelder reported that samples of milk from groceries averaged 4,500,000. It cannot be

pointed out too frequently that this excessive bacterial contamination is unnecessary; and that it can in large part be prevented by attention to simple details of cleanliness, involving almost no increase in expense. In several large cities milk collected and handled in such a way as to be 'certified' or recommended by physicians for infant feeding is found to contain very few bacteria. The requirements of the New York Milk Commission specify that certified milk shall contain not more than 30,000 bacteria per cubic centimeter, and those of the Philadelphia Milk Commission that it shall have not more than 10,000. Little difficulty has been found in conforming to this standard. The city of Boston has established a limit of 500,000, and the city of Milwaukee, 250,000. In still smaller communities it is possible to reduce the bacterial content of milk far below these figures."<sup>1</sup>

Dairy "C" uses a fair covered wagon, and may carry ice sometimes. On two occasions I found no ice in his wagon. On August 28, with a temperature of 78 F., a sample of his milk showed a temperature of 68 F. very soon after delivery. This sample may have been iced. The bottles of this dairy were commonly dirty on the outside, and caps were dirty. I believe the price charged was 30 cents a gallon.

Dairy "D" delivers milk in a fair covered wagon, and has facilities for ice that is used on the milk of the night before. Bottles and caps are clean. Milk sold at \$1.75 for twenty quart tickets.

Dairy "E" uses an old dilapidated wagon, not covered, and using no ice. On August 18, with a temperature of 90 F., a sample of milk showed a temperature of 80 F. Part of this milk was delivered from cans. Bottles appeared fairly



A study in milk houses.

## II. STUDY OF WAGONS, ETC.

Wagons were studied as to general appearance, cleanliness, mode of carrying milk (whether in bottles or cans), temperature of milk at time of delivery, ice carried or not, bottles on outside clean or dirty, covers clean or dirty, and price of milk as retailed.

Dairy "A" uses covered wagons, of good construction, and in summer carries ice, delivering a well-cooled milk. The exact temperature on any morning was not taken but was noted to be that of a well-iced milk. Bottles and caps are clean. Twenty quart tickets were sold for \$1.50.

Dairy "B" used a covered wagon of good construction, and carrying some ice said to be used with the milk of the night before only. On August 18—a hot morning of 90 F.—sample of this milk showed on delivery a temperature of 80 F. Bottles are clean and caps are clean. Milk sells for 30 cents a gallon.

clean but the caps were often very, very nasty. Contained dirt from an old blanket thrown over them in transportation, and often caps were so dirty as to leave no doubt that they had been reused. Once a cap of another dairy was used—this undoubtedly second-hand. Milk retailed at 5 cents a quart.

Dairy "F" sells milk from bottles fairly clean, from a small covered wagon with no use at all of ice. On August 18 a sample from this wagon showed a temperature of 80 F. Milk sold at 30 cents a gallon, and I believe a little less by tickets.

Dairy "G" sells milk from a covered wagon and from cans only. No attempt made to ice or cool. Temperature of a sample on August 28—a fairly cool morning—showed a temperature of 75 F. on delivery. Milk sells at 30 cents a gallon.

1. Jordan: General Bacteriology, p. 469.



### III. USE OF THE VARIOUS MILKS FOR FOOD

This was done carefully by the author for five of the seven dairies studied; and was also followed out during the preceding spring and winter; not one sample but many, for each dairy reported, were used. Dairy "A" not properly palatable, seemed "thin," soured quickly in hot weather. Dairy "B," properly palatable, a wholesome food, and not readily souring. Dairy "C," a "medium" tasting milk; not perfectly satisfactory. Dairy "D," a wholesome food of fine flavor. Dairy "E," a milk markedly unaerated, of poor flavor, and quickly souring. Milk of Dairies "F" and "G" not used by the author.

### IV. STUDY OF DAIRIES — SCORING

This study, which is of highest importance, consists in securing first-hand information as to conditions under which all the milk-supply is produced, by visiting dairies, learning number of cows, conditions of barns, milk-houses, methods of sterilization, etc., and scoring by use of the official score card provided by the Department of Agriculture of the U. S. Government. A cut is shown of one side of one of these cards, with a specimen of a score secured.

Dairy "A" receives milk from several farms, and only two of these were scored. One farm was producing about 150 gallons of milk daily, in whole or in part retailed by Dairy "A." A good barn, fairly clean, with no aerator or sterilizer to be found on the place. Milk is put into large cans directly, cooled in a standing pool of good spring water in a good milk-house without aeration or ice. It is carried to town in the cans, then bottled. The score allowed this plant was 65 — which was probably a liberal score.

A second farm of Dairy "A" produced about 80 gallons of milk a day. This is put hot and unaerated into large cans, scarcely cooled at all in a standing tank of luke-warm water, and later taken to town to be bottled. The stable boy said the boss could not afford to use ice to cool the cans. Stable was dark, poorly ventilated, milking done by boys, as clean as milking boys naturally are. A sort of sterilizer was found on the place, referred to by one of the employees as "the peanut-roaster." One of the boys said it had not been used for a "couple of days," as they had not had time. This was September 14, in some of our hottest weather. The score of this dairy was 46. No other of the producers for Dairy "A" was visited. Dairy "A" has a fine bottling plant in town, with facilities for sterilizing, icing, etc. Their problem is clearly to get a cleaner milk delivered to them by their producers. If this can be done, there is no reason why their bacterial and leukocyte count should not be much less.

Dairy "B" produced about 45 gallons of milk daily; and part of this only, mainly the morning's milk, is retailed in bottles. Barn clean, light, well-ventilated, walls and ceiling whitewashed, barn-yard clean; milk-house well-

arranged, screened, convenient and well supplied with ice and water for cooling and washing. Proper sterilizer. The score of Dairy "B" was 87.

Dairy "C" produces about 25 gallons of morning's milk retailed in bottles. A good barn and well-built milk-room. This room, with an open door not screened, abounded in flies. Water for cleaning, scarce. Aerator present and used but not cooled, as "pipes were down" by which water had been supplied. Dirty water was standing in tank for cleaning on two various visits. A well-built refrigerator had little ice in it, and water standing in the same was not cold when we drank of it. As to dirt on outside of bottles, attendant said it was blown over them daily in the sterilizer by the high pressure of steam to which he saw fit to subject them. The high bacterial count of this milk showed that the apparatus on this place is, to say the least, not well used. Score 59.

Dairy "D" produces about 25 gallons of milk a day, part of night's milk not being retailed. Lacks in barn and stable structures. This is more his own loss than a sanitary defect. In winter has barn where cows are kept separate from milking-stable. Water well supplied. Yard clean. Milk well handled, cooled, aerated, stored on ice, bottles and cans thoroughly sterilized in live steam thirty minutes. Score 77.

Dairy "E" produces about 10 gallons of milk a day, retailed from bottles and cans. A small barn without windows, without ventilation — a most peculiar design. Stables without a gutter. Milk-house a combination. No screens, no aerator, no cooler, no ice. In the middle of the milk-house stood a tub of dirty water that had been the "second wash" for the bottles. "Sterilization" by "hot water." Chickens enjoy the milk-room, which does no harm. Milk is peddled twice daily so customer can have it "warm from the cows." The score of this dairy was 31.

Dairy "F" produces about 40 gallons and retails morning milk at least in bottles. A bad condition. A boy does most of the work. Stable very open — a mere shed. No milk-house. Milk is put hot and unaerated into bottles just well washed, not sterilized, and set on a common small refrigerator on a porch with some ice in it. "Means to get a milk-house and a sterilizer," but has been in retail business about a year. Score 33.

Dairy "G" retails about 20 gallons of morning milk only, sold entirely from cans. Has no milk-house at all. No sterilizer, and no cooler of any sort. Uses no ice. Stable is merely a shed. Allowing the most possible on all visible good points, the score is 43.

Having followed out a study of this kind, we are led to conclude that the milk-supply of the town is not as bad as is the rule in the largest cities, and not by any means as good as one could desire. There are at least two producers who

sterilize, and who do it carefully. It is also true that the majority of the producers are willing to improve their methods if they could be taught the reason for improvement, and if real pressure was brought for the enforcement of sanitary ordi-

health authorities. We see no reason why a score of each dairy about the town could not be taken once a month, or once in two months; or why samples should not be unexpectedly taken from each dairy and analyzed at least twice a month;

## DETAILED SCORE.

EQUIPMENT.	SCORE.		METHODS.	SCORE.	
	Perfect.	Allowed.		Perfect.	Allowed.
COWS.			COWS.		
Health .....	6	6	Cleanliness of cows .....	8	8
Apparently in good health..... 1			STABLES.		
If tested with tuberculin once a year and no tuberculosis is found, or if tested once in six months and all reacting animals removed..... 5			Cleanliness of stables .....	6	0
(If tested only once a year and reacting animals found and removed, 2.)			Floor .....	2	
Comfort .....	2	0	Walls .....	1	
Bedding .....	1		Ceiling and ledges .....	1	
Temperature of stable..... 1			Mangers and partitions..... 1		
Food (clean and wholesome) .....	2	2	Windows .....	1	
Water .....	2	1	Stable air at milking time .....	6	0
Clean and fresh..... 1			Barnyard clean and well drained..... 2		2
Convenient and abundant .....	1		Removal of manure daily to field or proper pit .....	2	1
STABLES.			(To 50 feet from stable, 1.)		
Location of stable .....	2	2	MILK ROOM.		
Well drained .....	1		Cleanliness of milk room .....	3	0
Free from contaminating surroundings .....	1		UTENSILS AND MILKING.		
Construction of stable .....	4	3	Care and cleanliness of utensils .....	8	1
Tight, sound floor and proper gutter .....	2		Thoroughly washed and sterilized in live steam for 30 minutes..... 5		
Smooth, tight walls and ceiling..... 1			(Thoroughly washed and placed over steam jet, 4; thoroughly washed and scalded with boiling water, 3; thoroughly washed, not scalded, 2.)		
Proper stall, tie, and manger..... 1			Inverted in pure air..... 3		
Light: Four sq. ft. of glass per cow. (Three sq. ft., 3; 2 sq. ft., 2; 1 sq. ft., 1. Deduct for uneven distribution.)	4	0	Cleanliness of milking..... 9		0
Ventilation: Automatic system .....	3	0	Clean, dry hands..... 3		
Adjustable windows..... 1			Udders washed and dried..... 6		
Cubic feet of space for cow: 500 to 1,000 feet..... 3		1	(Udders cleaned with moist cloth, 4; cleaned with dry cloth at least 15 minutes before milking, 1.)		
(Less than 500 feet, 2; less than 400 feet, 1; less than 300 feet, 0; over 1,000 feet, 0.)			HANDLING THE MILK.		
UTENSILS.			Cleanliness of attendants .....	1	0
Construction and condition of utensils..... 1		1	Milk removed immediately from stable .....	2	2
Water for cleaning (Clean, convenient, and abundant.)	1	0	Prompt cooling (cooled immediately after milking each cow) .....	2	0
Small-top milking pail .....	3	0	Efficient cooling; below 50° F. (51° to 55°, 4; 56° to 60°, 2.)	5	0
Facilities for hot water or steam..... 1		0	Storage; below 50° F. (51° to 55°, 2; 56° to 60°, 1.)	3	0
(Should be in milk house, not in kitchen.)			Transportation; iced in summer (For jacket or wet blanket, allow 2; dry blanket or covered wagon, 1.)	2	1
Milk cooler..... 1		0			
Clean milking suits .....	1	0			
MILK ROOM.					
Location of milk room .....	2	0			
Free from contaminating surroundings .....	1				
Convenient .....	1				
Construction of milk room..... 2		0			
Floor, walls, and ceiling..... 1					
Light, ventilation, screens..... 1					
Total .....	40	16	Total .....	60	15

Equipment ..... + Methods ..... = **31** Final Score.

NOTE 1.—If any filthy condition is found, particularly dirty utensils, the total score shall be limited to 49.

NOTE 2.—If the water is exposed to dangerous contamination or there is evidence of the presence of a dangerous disease in animals or attendants, the score shall be 0.

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nances. The board of health had a duty and an opportunity. As I was informed, there are now certain ordinances designed to regulate the milk-supply and these are completely ignored by the

or why the public should not be informed of how the dairies score and how their milks test. Then if persons choose to buy a dirty and inferior milk it will be their own choice.



## FUNCTION OF THE DUCTLESS GLANDS \*

CHARLES W. WATTS, M.D.  
FAYETTE, MO.

We had no choice left us as to the subject to be discussed nor have we any help furnished us by the anatomist or physiologist. So, do not view this with a critic's eye, but pass its imperfections by.

For fifty years we have been hoping to get some light on this shrouded subject, and yet we appear no nearer the solution of their functions than what Virchow and others of that early date gave us.

Since 1894 we have performed several autopsies on these glands and some operations. Yet, while ignorant of the functions, we believe they have functions as much as the duct glands have, and we know about as much positively as we do of most of the duct glands. What do we know positively and without doubt about the function of any gland? About as much as we do of the *modus operandi* of any drug. We verily believe that our all wise Creator understood his work well and did not make a single useless or unnecessary gland or organ in the body, and it is our duty by close study and research to find out his designs. It pays to study closely this important field, and now it is being studied by the greatest scholars in America and Europe since the days of Ambroscrombi and Virchow.

We must be allowed to say by prefatory remarks that we believe all good and thorough anatomists, pathologists and physiologists, as well as surgeons and physicians, are born such and developed by close study of a very personal character. Those who are made are, as a rule, failures. Some men are supplied with a large amount of gray matter while others have but little and many content themselves living on the labor of others with no desire for personal investigations of their own. All great surgeons are good physicians, anatomists and pathologists, while a good physician is not necessarily a great surgeon.

As to the correct number of ductless glands doctors differ, like anatomists as to the number of bones in the skeleton, some saying 206 while others say 226. We read an article by a recent writer who gives thirteen ductless glands, while another finds but five in which no excretory gland or duct has been found.

We have not time, space or desire to speak of more than a few, such as the thyroid, the parathyroid, thymus, the pituitary body lying in its sella turcica bed, seminals, suprarenals and appendix vermiformis cecii. Professor Wendlein

of Kansas is now one of our investigators, and Dr. Lorand has thrown much light on their use, abuse and treatment.

We commence with the thyroid gland, located in front and connected with the trachea and larynx. It is composed of three lobes connected by an isthmus covered by sternohyoid, thyroïd and omohyoid. The borders of the gland extend as far back as the lower part of the pharynx; it is of a brownish red color, and weighs about 2 ounces. When hypertrophied it may be as large as a fetal head. We had one in 1876 that measured 10 by 12 inches, and the patient wore it in a sack. She was in good health at 65. The thyroid is invested with a thin connective tissue capsule dividing it into irregular cavities made up of closed vesicles filled with a yellow, glairy fluid. These vesicles are separated by connective tissue. Drs. Barber and Wendlein have given its minute structure very close study. We know that the lesions of this important gland are the source of cretins, acromegaly, etc. We had the pleasure of examining some of these in the hospitals of Philadelphia, with Professors Pancoast, Gross, Agnew and others, among them being a giantess of 750 pounds, the giant of Vermont, 780 pounds; also met the Commodore Nutt and lady, Tom Thumb and our own Ella Ewing. The most baffling mystery in all human nature's machinery are these little patches in the throat: collections of anomalous tissue that science designates as ductless glands.

Asylums for the feeble-minded everywhere have many patients because of these so-called ductless glands. We here assert positively that the term ductless gland is a pseudonym and a shame to our profession simply because we have not found an excretory duct. These abnormalities prove there is a departure of the fluid from these little patches hidden away in the throat into nearby and remote tissues by the effects produced, such as cretins; that pitifully and almost hopelessly mentally maimed ones are made so by these inflammatory patches. Yet, we are glad to know that many of our young and old surgeons, among whom we are glad to mention Dr. Smith of Macon, who has brought before our medical society clinics several of these cases and exhibited results of treatment from year to year, are showing some improvement.

Goiter, a hideous malformation that is all too common, is traced to these patches of adventitious cell life in human throats. And here let me enter a clear protest against calling these abnormalities such as exophthalmic goiter, after men, such as Graves, disease. This is wrong and inflicts a great, misleading idea, as much so as calling astragalocalcanean amputation after Perigroff or Chopart, to the confusion of the young student. For the sake of progress and the uplift of our science, we should call a halt on naming along these lines.

\* A paper prepared by order of the Howard County Medical Society at its meeting, Friday, March 3, 1911, to be read at the annual meeting of the Missouri State Medical Association in Kansas City, May, 1911, and read by title in that Association.

What part do these glands play in the human system? Why do they make giants, dwarfs, cretins and other forms of infantile imbecility? All these questions are being thoroughly sifted and investigated by scientists throughout the world with the help of the home surgeon in every day practice. All will be revealed by the searchlight now being turned on in the blaze of the twentieth century investigators.

The thyroid and parathyroid glands often do not give any trouble throughout life. But in other instances they do work havoc and destroy lives through hypertrophied and atrophied conditions. Yet in this field of operation and medication we reap our richest harvests and get our highest praise and laudation from patients, the profession and friends. We have removed the thyroid entirely several times and had no ill effects such as myxedemas, and we have come to think that if due caution is used by the operator and preventives judiciously employed, myxedema will occur only as a coincident rather than a direct result, and may be avoided. By a judicious use of extracts, as Lorand has suggested, many old as well as young lives may be saved and the poor sufferers who would welcome death may receive a new lease on life. These glands are intimately related and furnish many new substances in the repair of Dame Nature, planting a rose where a thorn grew, giving joy and peace in the place of woe and despair. In some mysterious way these glands come to the rescue of Nature and throw a rose tint where pallor spread and the dusty, waxy cachexia reveled in her glory of pain and disastrous destruction of cell life. Often by removing a part of the gland we can relieve and save, and here conservative surgery shows at her best. In one case of cystic goiter we aspirated three times and removed 6 ounces from each of the three cysts. They refilled, but we successfully operated again.

The thymus gland is situated just below the thyroid and is related in structure to the latter. It has two lobes, placed in close contact along the median line partly in the mediastinum. It is covered by the sternum and origins of the sternohyoid. It is of a pinkish-gray color, soft and lobulated, 2 inches long by  $1\frac{1}{2}$  wide, its lobes varying in size. Watney says each follicle consists of medullary and cortical substance composed of lymphoid cells held by a delicate reticulum. Its function is of importance to the adjacent cells. Having performed its function, this little gland disappears in early life and unlike its elder sister, the thyroid, plays no part in respiration so far as we know.

We now ascend to the base of the skull and knock at the basilar foramen for entrance; and laying aside the membranes we come to the far-famed pituitary gland, said to be the source of control of bone growth. It is called also the

hypophysis cerebri, is of a reddish-gray color, and very vascular, weighing from 5 to 15 grains. It is oval in form, situated in the arms of the sella turcica and retained by a slip of dura mater. It is lined with columnar epithelium and surrounded, like other glands, by a network of lymphatics and capillary blood-vessels. It is said that when its secretion is plentiful the growth of bone is rapid; that after a child has been ill with fever, the diseased condition excites the pituitary body to renewed activity, and osseous growth takes place to supply the deficiency. Thus the little ones grow taller by renewed activity of the gland or become stunted by a checking of the activity of this gland. The pituitary body has been removed successfully through the nose by Professor Keen and other American surgeons, although some have doubted this report. Let us respect the pituitary gland which, though small in size, plays such an important part in the correct adjustment of the economy.

Passing on we come to the little gland called the pineal body, where resides the soul of man, if we are to believe the ancients. The gland is a small, reddish body placed immediately behind the posterior commissure and between the nates on which it rests, being retained *in situ* by a duplication of the pia mater 4 lines long and 2 wide; it is larger in children and females. The base is connected by two pedicles passing forward on the upper and inner margin of the optic thalamus; it is lined as the other glands, the follicles holding a quantity of sabulous matter.

We now pass down to the thoracic and abdominal cavities and light on the suprarenal capsule. The suprarenal capsule is situated at the back part of the abdomen behind the peritoneum immediately in front of either kidney, hence the name; it consists of two small flattened glandular bodies of a yellow color, the right one larger than the left, resembling a cocked hat; the left is semi-lunar and higher up than the right. The gland consists of external or cortical and internal medullary, like other ductless glands; it is of a deep yellow color. The medulla is soft and pulpy, of a dark brown color. How very fascinating is the study of these bodies to the live scientist as they play such an important part in diabetes mellitus and other frequent maladies; they are indeed said to be the most important study of all, as it is said they regulate the blood-pressure in all parts of the body by speeding the heart's action or putting the brakes on that energetic, hollow muscle. Gentlemen who tarry long at the wine cup and rise the next day with red eyes and headaches may have the color restored and the pain relieved by the solution of suprarenal extract. Tell me, careless one, that we are not to know the functions of these wonderful bodies? Happy and successful are those who not only



study the functions of organs but relieve and cure by the application of their knowledge. I have this year the gratitude of three gentlemen and four ladies who had fallen under the wine cup, but they are now well; others also were on the down grade from lesions dependent on this cause but they are now well and following their occupations with success.

Physicians who are routinists and unsuccessful in relieving distress should take a hint and quit, or give way to those non-political men who do relieve.

Much as I should like to dwell on the functions of these glands and their influence on the metabolism, I must proceed to the vermiform appendix, that wonderful little gland so frequently abused and so often sacrificed because we have not yet discovered what its proper function may be. It is attached to the lower end of the cecum by a long, narrow, worm-like tube; it is found in all mammalia except in some of the higher apes. It is 3 to 6 inches long with a lumen about the size of crow's quill.

What is its function? we asked the old anatomist and his son, Professor Pancoast. Some say they answered "a switch line for generated sulphuretted hydrogen." I take no stock in the theory that the appendix is purely rudimentary or vestigial and of no value. Have you ever noted the condition of health of those from whom the appendix has been removed? Did you never see the watch chain dangling on the left side? Have you never had bad results? In the onward rush to gain name and fame many lose sight of the consequences. I do not believe the Creator ever made or left a useless gland or appendix. While I have the highest respect and regard for the noble surgeon who has to remove the appendix to save life and preserve health to a certain degree, words fail me to express my contempt for that man who has no respect for God's creation or refuses to respect Dame Nature in her requirements; but these useful glands must go down before the tyrannical biped.

I would like to dwell on the pancreas and the spleen. The spleen is the mighty reservoir to supply hemoglobin, red corpuscles, coloring matter, etc. The ductless glands exercise a marvelous influence over the mind, in insanities, grief, joy and sorrow. A man with perfectly healthy ductless glands is strong and courageous. Everybody is the Smith of his own luck, and luck is not chance but depends largely on healthy ductless glands. Brown-Séquard and Lorand have given to the world of science a mighty stimulus by their investigations, proving that man often does not die but kills himself by culpable neglect. Experiments with the extracts have passed beyond the field of conjecture into a surety in many instances and yet we are only in the infancy of this wonderful field of investigation. The field

may be flooded with charlatans and quacks but this holds true also of every other field of research and should not dishearten but stimulate us to renewed exertion in searching for light and liberty from the galling slavery of ignorance.

God grant to our noble profession the privilege of planting her banner high above all others and that before the passing of the second decade of the twentieth century we may have solved to completion the function of every so-called ductless gland; and the obliteration by legislation of every person who would clog the wheels of progress; and plant a competent man in the president's cabinet so that material and facilities may be furnished for the cultivation and development of the truths connected with all important fields of medical science. Then will there be fewer deaths, suicides, thefts, murders and violations of every moral law.

#### A CASE OF PYONEPHROSIS FROM CALCULUS IN KIDNEY

ERNST L. HAFFNER, M.D.  
HERMANN, MO.

I wish to report a case of pyonephrosis caused by a calculus lodged in the pelvis of the right kidney. The calculus caused obstruction in the upper ureteric ostium which was at times complete when it would cause a severe colic and large quantities of pus would be forced into the blad-



der. The accompanying illustration shows the kidney, which was removed by myself assisted by Drs. Mankopf and Auferheide, Sept. 17, 1911, through an abdominal incision. The patient, who is 60 years old, made an uneventful recovery. The urine from the left kidney is perfectly normal. The right kidney weighed  $1\frac{3}{4}$  pounds at the time of removal, and contained numerous cavities from which three-quarters of a pint of pus were drained. The stone, which is seen in the illustration, is  $1\frac{7}{8}$  inches in length and one-half inch in diameter.

NOTE.—Patient at this time is feeling perfectly well and has gained 18 pounds in weight.

# THE JOURNAL

OF THE

## Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

APRIL, 1912

### EDITORIALS

#### THE FIFTY-FIFTH ANNUAL MEETING — SEDALIA

The arrangements for the fifty-fifth annual meeting, to be held at Sedalia, are about completed, the Sedalia members having begun preparations early so that everything shall be in readiness to accommodate the largest meeting in our history.

Sedalia is the county seat of Pettis County and the court-house has been secured for holding the sessions of the various branches of the Association; the public meetings on Tuesday and Wednesday will be held in the Sedalia opera-house. The Association owes its thanks to the county court as that body has agreed to adjourn its sessions for one week in order to give the Association the use of the building.

The House of Delegates, the general sessions, the Medical and Surgical sections and the Secretaries Association will hold their meetings in the court-house; also the Judicial Council and the various committees will have rooms in the same building; thus they may meet without interfering with the business of the other bodies. This arrangement is ideal for the expeditious transaction of the proceedings of the meeting.

The exhibits will be located in the hall between the two large rooms where the scientific sessions will be held. We already have reservations from publishers, instrument firms and others who have articles to present for inspection by the members.

The hotel accommodations are ample. The principal hotels are the Hotel Terry, which will be headquarters, the La Moore and the Walch European Hotel. In another column we publish the rates and accommodations offered. Reservations should be made promptly so that there shall be no disappointments and confusion on arrival.

Dr. S. G. Kelly is chairman of the committee of arrangements at Sedalia. He will give prompt and careful attention to any requests for accommodations or information.

The indications point to one of the largest meetings in our history. Sedalia is very accessible from all parts of the state and members are coming to realize that their professional,

personal and material interests can be conserved and advanced only through their own organized efforts.

The program contains about fifty-five papers, the subjects being well diversified and reflecting the trend of medical thought of to-day.

This meeting should be, and we believe it will be, one of the most interesting and instructive that the Association has ever held.

#### DELINQUENT MEMBERS CANNOT REGISTER AT ANNUAL MEETING

Membership in the county society and state association is a privilege that should be prized above membership in any other organization, and the requirements for maintaining good standing and continuous affiliation should never be ignored or put aside for less important associations. And yet some members neglect to discharge the very important though certainly not burdensome duty of paying their annual assessment until it suits their convenience to do so; at the same time they are not at all hesitant in their demands on the organization for participating in the rights and privileges that properly come only after the member has met his obligations to the Association. We desire therefore to impress on every member that the benefits and privileges of affiliation with the organized profession of the state and nation are far greater than benefits of membership in any other organization, and we urge on all who have not yet paid their dues to attend to this simple duty at once.

We must remind the members that all privileges are suspended unless dues are paid soon after January 1 of each year although it has been customary to extend credit to April 1: after this date further neglect to pay dues imperils good standing and continued affiliation in the county society, the state association and the American Medical Association.

The date of the annual meeting will soon arrive and only those members who have respected their obligations to the organization and paid their assessments will be permitted to register and take part.

#### SPECIAL RATE FOR THE SEDALIA MEETING

The railroads will undoubtedly grant a reduction on the round trip rate for the Sedalia meeting, probably allowing two-thirds off the return fare. In order to take advantage of this reduction it is necessary that members obtain a "certificate" from the agent selling the ticket to the meeting; if 100 such "certificates" are presented



the reduction will be granted. Do not fail to secure a "certificate" from your local ticket agent when buying your ticket to Sedalia and deposit this certificate with the secretary at the meeting.

### COUNTY SECRETARIES SOCIETY

The County Secretaries Society will meet at Sedalia on the first day of the annual session, May 21. The secretary, Dr. B. B. Parrish of Kirksville, is arranging the program and desires to hear from all county secretaries who expect to be present.

The Secretaries Society is a very important body and exerts far-reaching influence in maintaining interesting meetings and energetic activity in the county societies. There should be a large gathering of secretaries this year and every phase of county society work brought under discussion. It will assist Dr. Parrish greatly in arranging for the meeting if all who expect to go to Sedalia will notify him of that fact.

### LET THE NAME TELL

Recently in discussing the practice of disguising well-known drugs by meaningless titles we proposed as an addition to the slogan "let the label tell" the equally important demand to "let the name tell." This suggestion was made in a discussion of the indiscriminate use of acetanilid when disguised by meaningless names such as "Phenalgin."

In agreement with this view *The Journal* of the American Medical Association,<sup>1</sup> in commenting on a report of a death from "Godfrey's Cordial," says: "It is much to be deplored that such a dangerous mixture as this should be designated as a 'cordial.' To the average individual, the term cordial gives the impression that the article bearing it is not only harmless but beneficial. If this shotgun mixture cannot be omitted from the next issue of the National Formulary, it is to be hoped that its synonym will be changed so as to render it less potent for harm. It is safe to assume that if 'Godfrey's Cordial' were known and sold under the name 'Godfrey's Opiate,' the public would be more chary in using the mixture."

It is to be hoped that the publishers of the National Formulary will adopt the rule of the Council on Pharmacy and Chemistry which refuses admission to New and Nonofficial Remedies of any mixture if its name does not indicate its potent constituents. Dangerous names such as "Godfrey's Cordial" should not be given official sanction by their inclusion in the National Formulary.

1. March 2, 1912, p. 650.

### STANDARDIZING ERGOT AND DIGITALIS PREPARATIONS

The well-known tendency to deterioration by certain drugs under various conditions has been a cause of much uncertainty in the mind of the practitioner as to what form of the drug would best meet the indications. This is particularly true of digitalis, ergot, strophanthus and similar drugs. It would seem that manufacturing pharmacists should have found long ago some method of standardizing these preparations so that physicians could place some reliance on their strength and activity up to at least a certain period or under certain restrictions, but there has been no great rush on the part of the manufacturer to meet this condition. The firm of H. K. Mulford Company, however, is nothing if not progressive and its attitude toward the demands made by the profession in the past has been commendable. It now announces that its preparations of ergot and digitalis have been standardized and in future the labels will be stamped with the date indicating the length of time of efficiency of the preparation. It would be well for our members to familiarize themselves with this new arrangement by asking for circulars of information which the firm will gladly send to inquirers. As a further step toward satisfying the profession with the integrity of its products the Mulford Company has submitted its preparations of digitalis and ergot—digitol and cornutol—to the Council on Pharmacy and Chemistry and that body has announced that these articles have been approved and will be included in New and Nonofficial Remedies.

### SEDALIA MEETING—HOTEL RATES

Hotel Terry—headquarters—American plan: 130 rooms, fifty with bath. Telephone in every room. Rates for each person, \$2.25 to \$2.50 without bath, \$3 to \$3.50 with bath.

The La Moore Hotel: twenty-five rooms. Rates: European plan, 50 cents, 75 cents and \$1. American plan, \$2 to \$2.50.

Walch European Hotel: thirty rooms. Rates: 50 cents, 75 cents and \$1.

The Pullman Hotel with about twenty-five rooms is being remodeled and will probably be ready for the meeting. The rates will be approximately 50 cents, 75 cents and \$1, European plan.

Many rooms in private homes and boarding houses will be thrown open to members at reasonable rates. Those desiring to secure these accommodations should communicate with Dr. S. G. Kelly, chairman of the committee on arrangements, or write either Mr. S. E. Spencer, president, or M. V. Carroll, secretary of the Booster Club of Sedalia. These gentlemen are cooperat-

ing with the profession to see that visitors have every attention.

Reservations at Hotel Terry should be made early and date of arrival mentioned.

### THOREMEDIN DISCREDITED

Another "wonderful" cancer-paste has been shown to owe its value to a well-known and discredited chemical. While such a statement regarding the "cures" put out by quacks and fakers would create little interest, this paste has been introduced by one who we have been led to believe came from abroad to give instruction and advice concerning it, has been endorsed by a physician of standing and has been put out by a firm whose reputation for honesty and conservatism has been unimpeachable. The introducer is one C. B. Semerack of Paris, France; the physician who has been its sponsor is Dr. L. Duncan Bulkley of New York and the firm which has been exploiting it is none other than the firm of E. R. Squibb and Sons.

While the exact composition of the preparation was not disclosed by its promoters the circulars suggested that its virtues were due to "radio-active thorium." Analysis made in the A. M. A. Chemical Laboratory has shown the paste to be composed essentially of inert lead sulphate two parts and strong sulphuric acid (oil of vitriol) one part with a per cent. or two of thorium sulphate. As the lead sulphate is practically insoluble and therefore inert, application of the paste amounts to applying strong sulphuric acid to the cancer, an inhuman treatment no longer used by physicians.

The use of the remedy is discussed by Dr. W. A. Pusey, Professor of Dermatology, College of Physicians and Surgeons, Chicago, in *The Journal A. M. A.* (March 9, 1912, p. 716), and its sponsors condemned in scathing terms. Thus Dr. Pusey says: "But what shall we think of E. R. Squibb and Sons offering a 35 per cent. sulphuric acid paste as a 'new thorium remedy' for the treatment of epitheliomas and birthmarks and heaven knows what ('papules,' 'molluscum,' etc.), and as a substitute for 'postoperative radium treatment' and for 'x-rays in postoperative treatment for neoplasms.' What has come over the house? The firm had a reputation for anybody to cherish with pride. E. R. Squibb is really a great name, and for half a century the firm of Squibb held the unquestioned confidence of the medical and pharmaceutical world. Have all of the traditions of the firm been suddenly thrown to the winds? Have its members determined all at once to embark on a career of exploitation of proprietary remedies under misleading names and of mischievous properties, whose composition it is not for the good of us of the profes-

sion to know, instead of zealously pursuing, as of old, the business of manufacturing drugs and chemicals of known composition and of unquestioned 'purity and reliability'? Has the result of sixty years of experience with the medical profession been so poor as only to lead to the conclusion that the old policy is not profitable or not worth while? As a matter of fact, is there a drop of the old Squibb blood in the firm? These are not useless questions and the medical profession has a right to raise them."

When it is considered how quickly Dr. Pusey recognized that the preparation must contain some powerful escharotic its championship by Dr. Bulkley is hard to understand. That the firm of E. R. Squibb and Sons, who presumably have competent chemists in their employ, should jeopardize their fair name by undertaking the exploitation of this "paste" is beyond our comprehension. However, the facts remain: Thoremadin contains as its essential constituent about 35 per cent. concentrated sulphuric acid.

### DR. WILEY'S RESIGNATION

Wiley has resigned. With what emotions of plutonian elation must the enemies of the pure food propaganda have welcomed that announcement! How the news of Wiley's retirement must have warmed the cockles of the hearts of them that wrought it! For Dr. Wiley's resignation from the Bureau of Chemistry, where as chief he long waged war unafraid against those who adulterate food for a price, means more than the mere retirement of an official. It signifies the triumph of unscrupulous commercialism and the defeat of what stands for straight principle in public life, integrity in commercial dealing, and regard for the inalienable rights of the individual in the conduct of departments of government. A partisan press gives the affair a political complexion, but the shame of it calls for a deeper blush.

The whole thing was adroitly managed. Not daring to dismiss him openly, the foreordained retirement of Dr. Wiley was engineered through a connivance that was as despicable as it was insidious, and as insidious as it was insistent. With a gloved hand events were shaped and turned in such a fashion as to make his resignation the only possible finish. Though the President exonerated him of the rapid charges of irregularity that had been brought against him, and though no fault could be found in him by the House committee that investigated the affairs of the department, yet official superiors who were antagonistic were retained in office to interdict and contradict as they desired and as was pleasing in the sight of those who were themselves not in evidence.



For six years, from the time when the manipulators of food products first felt the pinch of law enforcement, the strife between them and Dr. Wiley has been augmenting; by degrees the interests engaged in manufacturing impure articles for public consumption have encroached on the activities of the Bureau of Chemistry, confining its jurisdiction, curtailing its operations, and removing from the realm of its consideration form after form of tainted food product or exempting them from control altogether, until to-day the Bureau of Chemistry is nothing but a chemical laboratory.

Wiley's active friendship for the Owen bill, which proposes a national board of health, drew the ire of the League for Medical Freedom, which formed a coalition with the impure food interests whose common aim was the emasculation of the Bureau of Chemistry and the defeat of the Owen bill. With what success the efforts of this unholy alliance have already been visited is apparent, and the position of the pawns foretells the fate of the Owen bill without enlisting the services of a prophet.

The transaction is a comment not only on the present administration, but on the pass to which things have come in this country, when a man of the mental and moral caliber of Dr. Wiley, under circumstances whose passivity is wholly specious, is "permitted" to resign from a post which is one of the strategic defenses against commercial corruption. It indicates in unmistakable lines to what extent the ramifications of the food trust and allied interests have reached, and is, moreover, the culmination of a piece of commercial Machiavellianism that vies with the unspeakable intrigues of medieval political history.

In seeking his successor nobody but a simpleton expects Dr. Wiley's equal will be sought. Obviously a man possessing Dr. Wiley's qualifications would be as objectionable to the interests in whose behalf this thing has been perpetrated as is Dr. Wiley himself.

The hope remains that the commercial vandals have overstepped themselves, and that a reaction will follow that shall redeem the mistakes which have been made.

Dr. Wiley's resignation was well timed at any rate. Coming as it does at a crucial moment in the history of the administration it will serve to direct public attention to where the blame belongs, and puts the issue up to the people.

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## EDITORIAL NOTES

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THE Wednesday Club of St. Louis, a woman's organization, has arranged for a series of lectures on "Hygiene of Childhood" to be given in the club rooms. Dr. George M. Tuttle delivered the

first lecture of February 27; his subject was "Digestion and Nutrition of Infants and Young Childhood."

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THE St. Louis Medical Society has devoted one evening a month since January to a series of public lectures on "The Defective Child." The lectures have created a deep interest in this phase of preventive medicine and attracted large and intelligent audiences of laymen and physicians, women seeming to be particularly interested in the subjects discussed.

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"WHY DIGITALIS FAILS" is the title of an interesting pamphlet made up entirely of excerpts reflecting the opinions of well-known writers and investigators of the reasons why digitalis does not fulfil the expectations of the physician at all times. It is entirely free from advertising matter, having been prepared with the single purpose of compiling reliable data on the question that forms the title. It is put out by the Hoffman-LaRoche Chemical Works, who will send copies on request.

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A THREE-DAY meeting for the discussion of mental diseases will be held at Chicago, April 17, 18, 19, under the auspices of the West Side Branch of the Chicago Medical Society and the Chicago Medical Society, to which alienists and neurologists from all states in the Union have been invited. At present some twenty-one specialists have promised to attend and read papers. The committee in charge is anxious that the profession in Missouri should be well represented and desires to extend the invitation through THE JOURNAL to all members who are interested in the subject of mental diseases. Those who desire to participate in the proceedings should address Dr. W. T. Mefford, President West Side Branch, 2159 West Madison Street, Chicago.

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JACKSON COUNTY MEDICAL SOCIETY held its first open meeting on February 6 at Kansas City and a number of prominent laymen representing the city government and unofficial civic bodies accepted invitations to attend the meeting. Addresses were delivered by Mr. Henry Jost of the prosecuting attorney's office, who has recently been nominated for the mayoralty on the Democratic ticket; Mr. Frederick McLure, of the Board of Public Welfare; the Rev. J. D. Ritchey, Rector of the St. Paul's Episcopal Church; and Hon. Darius Brown, Mayor of the city. In commenting on the influence meetings of this character have on the purposes and objects of organized medicine, *The Bulletin* of the Jackson County Medical Society says:

Considering the real purport and significance of this open meeting the medical profession, which has until

recent years been isolated in its interests and outside relations, must acknowledge an awakening. Our practice is with the body social as well as with the body physical. Two such open meetings could with justice be held each year, diverting from things strictly scientific and demonstrating a community interest on the part of our profession, and inviting suggestions and criticisms from other professions and organizations in the city.

## CORRESPONDENCE

NEW YORK, March 14, 1912.

*To the Editor:*—There appeared in *The Journal of the American Medical Association* of March 9 an article by William Allen Pusey, M.D., of Chicago, regarding Thoremadin, and an editorial note on the same subject. In both these writings our good name has been attacked. We shall publish in due course a complete reply, which will present the matter in an entirely different light, and will convince the unbiased reader that our position has been correct and ethical in every particular. Meantime, however, we wish to assure you that a grievous error has been committed by Dr. Pusey and the editorial writer who based himself on Dr. Pusey's article.

With this prompt notification from us before you, we feel confident that as a matter of justice you will defer your comment until our side has been presented.

We are, dear sir, Faithfully yours,

E. R. SQUIBB & SONS,

THEODORE WEICKER, Vice-President.

P. S.—You are at liberty to publish this letter.

[We shall be glad to publish any explanation that Messrs. Squibb and Sons have to offer.—Ed.]

## SIC VOS NON VOBIS

*To the Editor:*—The "principles of medical ethics" are all right. "High purposes" are truly elevating. "Public welfare" can't be beat. But neither one, nor all of them, will buy an ounce of food or a single garment for a physician's family. And as I read an article on medical ethics in the December number of *THE JOURNAL* I wondered "Where does the country physician come in?"

As I read about those æsculapian thunderbolts hurled at the country physician who divides his fee with the city surgeon, or vice versa, I wondered what I had done or left undone.

About one year ago I received a letter from a city surgeon stating: "On looking over my books I find you have not sent me any cases during the past year." I replied: "No, and I can't find any account of your sending me any either." I then went on and enumerated the cases I had sent him during the past few years, amounting to several hundred dollars, and in probably a rather petu-

lant spirit asked, "Now, what have you done for me?" His answer was that he had charged nominal fees, and didn't suppose I expected any commission, but would get mine from the patients. Then I was mad, and wrote him I never expected nor would have accepted a commission. But his statement that he expected "to recommend physicians up in our county (25 or 30 miles from him) to whosoever favored him" is what put the iron into my soul. I counted a half dozen well-to-do families that were doing all their doctoring that they could do with him that had employed me in former years. And why shouldn't they? Had I not sent them to him because he was more skilled than I? It was no use to explain that a town of 1,000 inhabitants could not support an up-to-date hospital where I could have the same environments that he had; and I considered it my duty to send them where these advantages existed. So I plodded along over muddy or frozen roads, through sunshine, rain or snow, and wondered "where the country physician comes in," for while I had no claim to the fees he was getting now, I couldn't figure out where the wrong existed if he had divided the fees in the cases we had in partnership—in the first time; but there may have been something wrong with the figures. Come to think of it, I have been splitting fees ever since I have been practicing medicine—thirty years—but it has been with some old "skin-flint" in order to keep his friendship and get him to settle without a lawsuit.

Suppose I am employed by a family to do their practice. I diagnose an ovarian cyst in the mother. With their permission—probably solicitation—I call in consultation a surgeon from a near-by city; he agrees with my opinion. We decide to send the lady to the hospital, he operates and charges \$200, the fee agreed on (for there is not one in a thousand but what wants to know what it is going to cost); he sends me \$100. Is that wrong? Am I not entitled to it? If it is wrong, would it make the wrong right if I told the husband? Or would it be all right and ethical if the surgeon kept all of it? Suppose a city physician had the same case and he calls in the same surgeon, would he let the surgeon pocket the fee? Nay, verily; they would divide the fee. But that is different from *splitting* the fee with a country physician. So where does the country physician come in?

This "sacrifice for the good of humanity," and "high moral principles," etc., are all right in their place, but I think the eighth verse of Paul's first letter to Timothy ought to be taken into consideration occasionally; and I cannot condemn the country practitioner for giving the city specialist the shake when he simply says "thank you" for case after case brought him. I have no more use for an ethical hog than any other kind, and as regards the "poor patient," that kind of a



surgeon generally trims him to the limit of his ability to pay, whether forced to divide or not.

It may be derogatory to professional character for a surgeon to offer to pay a *commission*—in fact, it would be an insult, to an honorable man: but for one physician to study a case, make a diagnosis, call in a specialist, and together they decide an operation is necessary, the regular (not excessive) fee is charged; then what? The specialist gets the fee: if successful, the credit; if not, the home physician gets the blame. Fresh air and blue sky are his remuneration.

Now, Mr. Editor, in taking this position I am supposing—nay, I know—the country physician (at least 99 per cent.) are honorable, conscientious men—men who are devoting their lives to suffering humanity. But that is no reason they should have their noses held against the grindstone until they sink exhausted in their tracks. They have families to support and children to educate, but I do not believe they will be a party to charging their friends and neighbors any “excessive fees.” but, on the other hand, will see that their friends get the benefit of “the greatest skill, and a fee commensurate with their ability to pay.” Some of these city theorists remind me of the young lady that was teaching her first country school: she had a mental arithmetic class up and asked Johnny the question: “If there were eleven sheep in a pasture, and five jumped over into a field, how many would be left?” “None,” replied the boy. “Oh! yes, there would be six left.” “No, there wouldn’t! You may know arithmetic, but you don’t know sheep.”

Oregon, Mo.

C. L. EVANS, M.D.

## NEWS NOTES

A SON was born to Dr. and Mrs. David S. Long of Harrisonville, on February 5. This youngest member of the medical fraternity has been christened David S., Jr.

DR. A. W. MCALESTER of Columbia, former dean of the medical department of the State University, has given his fine stallion Laurium to the Missouri Board of Breeding of Army Remounts.

DR. C. E. SHELTON of Eldon has set a fine example for the country practitioner by fitting up a suite of offices in modern fashion. The suite consists of three rooms, well lighted, sanitary and comfortably furnished.

DR. R. W. HOGBOOM, surgeon for the Frisco Railroad at Springfield, was married to Miss Corinne Hall, niece of Professor Hall of Drury College, on February 17. The couple has recently returned from a trip to Palm Beach, Key West, Havana and other points in the South.

DR. CHARLES L. KLENK of St. Louis announces that he has established a private laboratory in Suite 400-408 Metropolitan Building, and will limit his work to bacteriologic and pathologic diagnosis, including Wassermann reactions and the preparation of autogenous vaccines.

THE *American Practitioner and News* of Louisville, Ky., and the *New England Medical Monthly* of Boston have been purchased by Dr. John W. Wainwright of New York. The two journals will be consolidated and in future published from New York under the name *The American Practitioner*.

THE North Missouri Medical Society will hold its spring session at Kirksville, June 16 and 17. All members of the State Medical Association are invited to attend; contributions to the program will be welcome. Those who desire to read papers should address the president, Dr. J. C. Lyter, Moberly.

DR. SAMUEL SHELDON, formerly of Trenton, and Councilor for the Fourth District, has been appointed state veterinarian and moved to Columbia, which will be his headquarters. One of his first duties in the new position will be the examination of dairy cows for the presence of tuberculosis.

THE Samaritan Hospital in Kansas City was closed by the health authorities last month on account of the character of attention given the patients. It is said the nurses in the hospital testified that criminal operations were performed on some of the women patients. Many of the nurses quit and the board of health revoked the license.

DR. C. A. JENNINGS, secretary of Chariton County Medical Society, Salisbury, recently suffered an apoplectic seizure with right-sided paralysis. The doctor is in his 76th year but was in such good physical condition that he rallied from the shock and is now sitting up. Dr. Jennings has been secretary of the county medical society for many years and very active in the medical affairs of the district.

DR. J. T. REDWINE of Poplar Bluff is the youngest physician in Missouri if not in the country, he being but 9 years old on his last birthday. We add our congratulations that he has successfully weathered the storms of nine long winters, each of four years' duration. The doctor was born Feb. 29, 1876. We hope he will attain his majority but haven't time to figure out how young he will be when that event happens.

DR. J. A. WATERMAN, superintendent of State Hospital at Farmington, is planning to give the inmates of the institution glimpses of life in the outer world through the medium of the moving picture, if the reports that come to us of his activity in this direction are correct. It is said Dr. Waterman has installed a modern motion picture machine at the hospital and exhibitions will be given at regular intervals for the edification and instruction of inmates and employees. It will no doubt prove a welcome diversion for the doctor's "guests."

THE Medico-Chirurgical College and Hospital of Philadelphia announces the completion of the new dispensary building located across the street from the hospital. The new building is probably one of the most complete dispensary buildings in the country. A unique feature is the arrangement of illumination from skylights instead of windows, in almost all the rooms. Another innovation is that there is no basement; instead, all gas, steam and water pipes, electric wires, etc., are carried into an attic space overhead where they are freely accessible at all times.

FIVE cents per year per resident is the sum the city of Independence, Mo., squanders on measures to protect the health of its 10,000 citizens. Dr. Calvin Atkins, city physician, at a meeting of the Commercial Club, informed the business men that Independence ought to have a vigorous, specially trained health officer, who should be city physician, medical inspector of school children and possess sufficient knowledge of chemistry to make tests of milk, water and other commodities affecting the health of the people. Such a man ought to give all his time to the city and be paid proportionately. Dr. Atkins also suggested that the city establish a hospital for the care of the indigent sick. Dr. N. P. Wood indorsed all the suggestions and urged the business men to pay more attention to the health of the people. Mr. John A. Kerr, president of the Commercial Club, promised to bring these matters to the attention of the people.

JAMES M. MARTIN, alias Dr. Frederick W. Lanoix and "Dr." L. L. Marshall, of Kansas City, were arrested charged with manslaughter in causing the death of a woman on whom they had operated. Martin is not a doctor but purloined the diploma of the deceased Dr. Frederick W. Lanoix of Quincy, Ill., and assumed that name and title, under which he has been operating in Missouri and Kansas for a number of years. Marshall, also an ex-drug clerk, hails from Fayette, Mo. He has a string of drug stores at Boonville, West Plains and New Franklin. He

boldly assumed the title of "Dr." without going to the trouble of stealing a diploma or a license, and has performed the surgical operations and prescribed for the patients at the Samaritan Hospital, of which he was president and manager. Dr. D. G. Alexander is also involved in the game and brazenly defied the health authorities by declaring the hospital would not close.

DR. G. W. BELSHE of Trenton, a member of Grundy County Medical Society and prominent in the profession in North Missouri, disappeared from his home very mysteriously, March 1, and wandered aimlessly in a dazed and unbalanced mental state for four days. When found by searchers, March 5, he was in a very serious condition, due to exposure to one of the worst storms of the winter.

Dr. Belshe was called by telephone to attend a patient in the outskirts of Trenton about 10:30 on the night of March 1: at 4 o'clock in the morning his horse returned home with the empty buggy. A search for the doctor was then begun and continued until he was found four days later in a cornfield 6 miles north of Trenton, eating an ear of corn. He remembered nothing of the circumstances of his wanderings and has not yet recovered sufficiently to explain the cause of his disappearance. It is supposed that the testimony he would give at the autopsy of a deserted child found on the railroad tracks was a possible cause of attack that resulted in his demented state and subsequent wanderings. It is expected that he will fully recover in a short time.

## DEATHS

DR. C. C. LEEPER of Braymer and a member of Caldwell County Medical Society died at a hospital in Kansas City, February 21, from blood poisoning resulting from a slight injury to a toe. Dr. Leeper had only recently moved to Excelsior Springs where he intended to pursue the practice of his profession and be with his daughter whose health required her to reside at Excelsior Springs. A few months ago his daughter died, which was a severe blow to Dr. Leeper, and this depression undoubtedly hastened his death.

Dr. Leeper was widely known in North Missouri and enjoyed the confidence and esteem of every one who knew him. He was a member of the county society, the Missouri State Medical Association and was president of the board of managers of the Industrial Home for Girls at Chillicothe.

His death is a great loss to the County Medical Society and the profession of the state. The fol-



lowing resolutions were adopted by Caldwell County Medical Society:

WHEREAS, In the course of natural events, a fellow member of the Caldwell County Medical Society has been taken from our ranks by death, therefore, be it

*Resolved*, That we, the members of the Caldwell County Medical Society, do hereby express our sincere sympathy to his widow as a token of our appreciation of him; and be it further

*Resolved*, That a copy of these resolutions be made a part of the records of this Society and a copy also be given to the local press.

S. D. SMITH,  
GEO. W. GOINS,  
Committee.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.

### RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

**GYNOVAL** is isoborneol isovalerate,  $\text{CH}_3\text{CH}(\text{CH}_3)\text{CH}_2\text{COO.C}_{10}\text{H}_{17}$ . It is closely related to bornyval (see N. A. R., 1912, p. 49). It is difficultly soluble in water. The action of gynoval is said to be that of a mild nerve and antispasmodic, resembling that of valerian. Dose, 0.25 to 0.50 gm. (4 to 8 grains) two to four times daily, best given after meals. Gynoval is marketed in the form of gynoval pearls, containing 0.25 gm. (4 grains) gynoval. Farbenfabriken of Elberfeld Co., New York (*Jour. A. M. A.*, Feb. 10, 1912, p. 411).

**EXSICCATED SODIUM SUCCINATE** (*Sodii Succinas Exsiccatus*) is the disodium salt of succinic acid containing not less than 95 per cent. of anhydrous sodium succinate,  $\text{NaOOC.CH}_2\text{CH}_2\text{COONa}$ . It is a white granular odorless powder, possessing a characteristic saline taste. It is readily soluble in water. It is a saline cathartic claimed by some to have an antiseptic action in the biliary tract and to be useful in combating infections of the gall-bladder and biliary passages. Dose, 0.3 gm. (5 grains) three or four times a day. Manufactured by Fairchild Bros. & Foster, New York, and by Merck & Co. (*Jour. A. M. A.*, Feb. 24, 1912, p. 554).

**ATOPHAN** is 2-phenyl-quinolin-4-carboxylic acid,  $\text{C}_9\text{H}_7\text{N.C}_6\text{H}_4\text{COOH}$ .2:4. The substance was first described by Doebner and Giesecke in 1887. Its therapeutic action was described by Nicolaier and Dohrn in 1908. It is insoluble in water but readily soluble in alkalies and has a slightly bitter taste.

It is said to be useful in gout, particularly in the acute attacks, acting more promptly than colchicum and without undesirable by-effects. In gout the dose

is from 0.5 gm. ( $7\frac{1}{2}$  grains) four times a day to 1 gm. (15 grains) three times a day, suspended in large quantities of water. To prevent the precipitation of free uric acid from the urine sodium bicarbonate may be administered simultaneously. In articular rheumatism daily doses of 3 to 5 gm. (45 to 75 grains) are prescribed.

Atophan is also marketed in the form of tablets, each tablet containing 0.5 gm. ( $7\frac{1}{2}$  grains). Schering & Glatz, N. Y. (*Jour. A. M. A.*, March 2, 1912, p. 633).

**CORNUTOL** is a biologically tested liquid extract of ergot. Dose, hypodermically, 0.65 to 2 c.c. (10 to 30 minims); by the mouth 0.65 to 4 c.c. (10 to 60 minims). The date of testing appears on each package. Cornutol is put up in 1 ounce vials and in ampules, each containing cornutol 2 c.c. (30 minims). H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, March 9, 1912, p. 701).

**DIGITOL** is a biologically and chemically standardized, fat-free tincture of digitalis, corresponding in drug strength to tincture of digitalis, U.S.P. Dose, 0.3 to 1 c.c. (5 to 15 minims). The date of testing appears on each package. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, March 9, 1912, p. 701).

**EUCODIN** is methyl-codeine bromide,  $\text{C}_{15}\text{H}_{21}\text{O}_2\text{N}(\text{CH}_3)\text{Br}$ . It is easily soluble in water. It corresponds to 80 per cent. of codeine and to its own weight of codeine sulphate. It is said to be useful as a sedative as a substitute for codeine, especially in cough, where its action sometimes favors secretion. Dose, 0.06 gm. (1 grain).

Eucodin is also marketed in the form of tablets each tablet containing eucodin 0.05 gm. (5-6 grain). Riedel & Co., New York (*Jour. A. M. A.*, March 16, 1912, p. 780).

**EUSCOPOL** is optically inactive scopolamine hydrobromide  $\text{C}_{17}\text{H}_{21}\text{O}_4\text{N.HBr}$ . It is easily soluble in water and alcohol. It closely resembles the official scopolamine hydrobromide in its physical, chemical and pharmacologic properties. It is claimed to have a milder action because of the absence of other alkaloids said to be contained in the natural scopolamine hydrobromide. Riedel & Co., New York (*Jour. A. M. A.*, March 16, 1912, p. 780).

### PHARMACEUTICAL PREPARATIONS OF ACCEPTED ARTICLES

Tablets, Oxyntin with Pepsin, each containing Oxyntin .3 gm. (5 grains) and pepsin equivalent to pepsin, U.S.P., 1 grain.

Capsules, Oxyntin with Nux Vomica, each containing Oxyntin .3 gm. (5 grains) and Nux Vomica equivalent to tincture Nux Vomica 0.33 c.c. (5 minims).

Capsules of Holadin, Bile Salts and Phenolphthalein, each containing Holadin 0.13 gm. (2 grains), Bile Salts, Fairchild 0.03 gm. ( $\frac{1}{2}$  grain), Phenolphthalein 0.065 gm. (1 grain).

Capsules of Holadin, Succinate of Soda and Bile Salts, each containing Holadin 0.20 gm. (3 grains), Sodium Succinate Exsiccated 0.20 gm. (3 grains) and Bile Salts, Fairchild 0.03 gm. ( $\frac{1}{2}$  grain).

Capsules of Bile Salts, Succinate of Soda and Phenolphthalein, each containing Bile Salts, Fairchild 0.065 gm. (1 grain), Sodium Succinate, Exsiccated 0.20 gm. (3 grains), and Phenolphthalein 0.03 gm. ( $\frac{1}{2}$  grain) (*Jour. A. M. A.*, March 16, 1912, p. 780).

### REFORM IN MEDICINES

**PROPRIETARY MANUFACTURERS COMBINE.**—The "patent-medicine" makers long ago realized the value of organization, and combined to form the Proprietary Association of America, which organization has opposed the enactment of laws that should protect the public from the evils of nostrums and quackery. Now

the manufacturers of "ethical proprietaries" have organized and formed the National Association of Manufacturers of Medicinal Preparations. This organization, like its "patent-medicine" prototype, has apparently been created with but one object in view, to make money. The association went on record as opposing the modification of the Food and Drugs Act, recommended in President Taft's special message, which would prevent "cancer cure" fakers and others in similarly disreputable businesses from publishing lies on the labels of their nostrums, the Mann bill, which would regulate the transportation of habit-forming drugs, Senate Bill 4727, which would require the weight or measure of all drugs sold in package form to be printed on the label (*Jour. A. M. A.*, Feb. 17, 1912, p. 487).

**IDENTIFYING THE MANUFACTURER.**—The National Association of Manufacturers of Medicinal Preparations apparently is opposed to legislation in the interest of public health and safety whenever such legislation would result in decreased profits for the manufacturers. Besides opposing the law that would prohibit the making of exaggerated and misleading therapeutic claims, the law that would regulate the transportation of habit-forming drugs, the law requiring the weight of drugs, sold in package form, to be printed on the label, it is also opposed to a law that would compel the manufacturers of all medicinal preparations to put their own names on their own products. Those who are familiar with pharmaceutical trade know that very many patent medicines are made by our large pharmaceutical houses and hence it will be understood why this association is opposed to any law that would permit the public, and particularly the medical profession, to know the class of trade some of its members cater to. Further, those who have followed patent medicine exposures will not be surprised to learn that the secretary of the National Association of Manufacturers of Medicinal Preparations characterized the bill which would permit the public to identify the manufacturer as "a foolish provision," or that the president of this organization should look on the bill as one "that we can conscientiously oppose." As an illustration of the strange bed-fellows made by politics and the nostrum business it is noted that the president of this organization, who thus opposes a law that would throw light on the connection between pharmaceutical manufacturers and the "great American fraud," was nominated for his position by a manufacturer who has long shouted from the house-tops that he made "no dope for quackery" (*Jour. A. M. A.*, Feb. 24, 1912, p. 559).

**RELIABILITY OF DIGITALIS AND ERGOT PREPARATIONS.**—Recent investigations by Edmunds and Hale of digitalis and ergot preparations, claimed to have been standardized biologically, suggested that the manufacturers had not used the care and skill in making the product which the advertising claims would lead one to expect. One manufacturer, the H. K. Mulford Company, has met these serious charges and having instituted the reforms suggested by the examination has secured the acceptance of its preparations, Cornuol and Digital, for inclusion with New and Nonofficial Remedies (*Jour. A. M. A.*, March 9, 1912, p. 705).

**SQUIBB'S THOREMEDIN (THORADIN).**—This "cancer paste" claimed to depend for its activity on radio-active thorium is shown by analysis in the A. M. A. Chemical Laboratory to contain 35 per cent. of concentrated sulphuric acid. Dr. W. A. Pusey points out that the activity of the cancer paste depends on the generally discarded and discredited cauterant sulphuric acid and deplores the fact that the honored name of E. R. Squibb and Sons should have become connected with this preparation (*Jour. A. M. A.*, March 9, 1912, p. 719).

**SULPHURRO.**—Sulphurro is put out by the C. M. C. Stewart Sulphur Company, Inc., Seattle, Washington. Examination in the A. M. A. Chemical Laboratory showed that it, like Sulphume and other "liquid sulphur" preparations, is a solution of calcium sulphide such as is obtained when sulphur, lime and water are boiled together. The foul smelling liquid is recommended to the public for the treatment of rheumatism, asthma, goiter, eczema, dyspepsia and all diseases of the stomach, bowels, kidneys, skin and blood. Its use as a rectal enema, a vaginal douche or as an eye wash is also recommended (*Jour. A. M. A.*, March 9, 1912, p. 719).

**DEFINITION OF NON-PROPRIETARY MIXTURES.**—To distinguish between mixtures that are not admitted to New and Nonofficial Remedies because they are non-proprietary and hence without the scope of the book from proprietaries that are not in the book because they are ineligible, the following definition of proprietary mixtures is given: "A mixture will be considered as proprietary, and therefore requiring consideration by the Council and admission to the book or appendix, if it contains any proprietary article, if it is marketed under a name which is in any way protected or if its manufacturer claims for it any unusual therapeutic qualities" (*Jour. A. M. A.*, March 9, 1912, p. 719).

**STERILIZATION OF COCAIN SOLUTIONS.**—Experiments have demonstrated that under ordinary conditions cocain solutions can be boiled without serious decomposition (*Jour. A. M. A.*, March 9, 1912, p. 721).

**MARJORIE HAMILTON'S OBESITY CURE.**—This is claimed to be a dietless and drugless system for the treatment of obesity. The advertising booklet sent out by Marjorie Hamilton, Denver, Colo., prescribes, however, a system of dieting and as a means of revenue to the promoter prescribes frequent baths with "Health-tone-Obesity Bath Powder," sold at \$2.00 a pound, to be applied to "the fat parts or whole body twice daily." Marjorie Hamilton's bath powder was examined in the Chemical Laboratory of the American Medical Association and found to consist chiefly of sodium carbonate with smaller amounts of magnesium sulphate, potassium nitrate and possibly sodium sulphate (*Jour. A. M. A.*, March 16, 1912, p. 798).

**PHENACETIN AND ACETPHENETIDIN.**—While at one time the product sold as phenacetin was protected by patent and the name trademarked now, that the patent has expired, the product as well as the name is non-proprietary. Although it is official in the pharmacopeia as acetphenetidin, physicians generally prescribe it by the formerly proprietary name phenacetin. As the product sold under the name phenacetin demands a price as much as five times that asked for acetphenetidin the A. M. A. Chemical Laboratory determined the purity of the market supply, of acetphenetidin and of phenacetin and found both equally pure. Inasmuch, therefore, as acetphenetidin complies with all the pharmacopeial requirements as to identity and purity, in just the same way as phenacetin, physicians need not hesitate in using the title of the U.S.P. "acetphenetidin" when prescribing this product (*Jour. A. M. A.*, March 16, 1912, p. 801).

**CHINOSOL.**—Although Chinosol is now recognized by the Council on Pharmacy and Chemistry and is described in New and Nonofficial Remedies, physicians, so the Chinosol Co. complains, are inclined to ignore the product, because at one time claims made for it were criticized in a report of the Council (*Jour. A. M. A.*, March 16, 1912, p. 804).

**TINCTURE OF IRON AND THE TEETH.**—Preparations claiming to contain tincture of ferric chloride in a form that will not affect the teeth are impossibilities. If such a preparation does not injure the teeth when



given in ordinary dilution, it does not contain chlorid of iron. If, therefore, one desires to use the chlorid of iron for its local effects on the throat, the stomach or the intestines, it is necessary to give it through a tube or largely diluted (*Jour. A. M. A.*, March 16, 1912, p. 805).

**CRESOLENE.**—Cresolene, or Vapo-Cresolene, according to the A. M. A., Chemical Laboratory is essentially cresol and corresponds in every respect to cresol, U.S.P. (*Jour. A. M. A.*, March 16, 1912, p. 806).

**DIABETIC FOODS.**—While much has been written to show that gluten flours and gluten foods are unreliable and unsatisfactory as food for diabetics nevertheless a study of the markets shows that there must be a steady and even growing demand for these products. The entirely unsatisfactory "standard" established by the government is plainly responsible in great measure for the unfortunate situation that now exists. The United States standard for gluten flour calls for a protein content of only about 40 per cent., leaving the unfortunate possibility of having a preparation which is one-half starch marketed in conformity with legal requirements. Recent analyses of gluten preparations sold in Connecticut showed that most of them exceed the requirements of the standard; yet these foods, the products of the Pure Gluten Food Co., The Health Food Co., Johnson Educator Food Co., D. M. Welch & Son and the Battle Creek Sanatorium Food Co., contained from 27 to 68.85 per cent. starch. It is suggested that a statement of starch content, on the label of each product, be made compulsory (Rep. Conn. Agric., Ex-  
per. Sta., 1911, Part II, p. 134).

**WHAT'S THE MATTER WITH MICHIGAN?**—"Professor Samuels," of eye water fame, finding things uncomfortable in Kansas, announces his proposed removal to Michigan, a state where quacks are least liable to inspection on the part of officials. Michigan, it appears, has as many mail-order medical fakes of a vicious and fraudulent character as can be found in any other three states in the Union, irrespective of population and one wonders what peculiar influence protects swindlers in this state (*Jour. A. M. A.*, March 23, 1912, p. 863).

**"BOOST FOR REXALL."**—The United Drug Company whose products are sold under the general trademarked name "Rexall" is a cooperative patent-medicine concern like the American Druggist Syndicate, "A. D. S.", composed of druggists who, not content with the profits derived from the sale of patent medicines, have engaged in their manufacture as well. Like other patent medicine manufacturers this concern, because of the more stringent state and federal laws governing the sale of "patent-medicines" in the United States has decided to extend its operations to England which is fast becoming the haven of patent-medicine promoters (*Jour. A. M. A.*, March 23, 1912, p. 876).

## SOCIETY PROCEEDINGS

### FIFTY-FIFTH ANNUAL MEETING OF THE MISSOURI STATE MEDICAL ASSOCIATION

Sedalia, May 21, 22, 23, 1912

#### PRELIMINARY PROGRAM

##### Medical Section and General Session

Title to be announced. M. C. Alderman, Sedalia.

Interesting Problems in Ear, Nose and Throat Practice. Robert Barclay, St. Louis.

Auto-Intoxication. J. M. Bell, St. Joseph.

Training of Nurses for Service in State Hospitals for the Insane. M. A. Bliss, St. Louis.

Empyema in Infancy. Jules M. Brady, St. Louis.

Hemorrhagic Diathesis in Children. D. A. Broderick, Kansas City.

Acidosis. Orville H. Brown, St. Louis.

Astasia-Abasia. J. D. Brummall, Salisbury.

Abdominal Pain Differentially Considered. J. Q. Chambers, Kansas City.

Report of Ten Cases of Duodenal Ulcer. C. C. Conover, Kansas City.

Single Incision Vaccination. George Dock, St. Louis.

Dietetic Treatment of Typhoid Fever. D. P. Dyer, Sedalia.

Thoracentesis as an Aid in the Diagnosis of Pleural and Pulmonary Diseases. Warren P. Elmer, St. Louis.

Nephritis: Its Diagnosis and Treatment. Wm. Engelbach, St. Louis.

Progress of National, State and Local Health Activities. F. B. Fuson, Springfield.

Nitrogen Poisoning. J. J. Gaines, Excelsior Springs.

The Differential Diagnosis of Uterine Cancer. George Gellhorn, St. Louis.

Serological Diagnosis of Syphilis and Gonorrhea; the Wassermann; the Gonorrheal Complement Fixation Test; the Weir Cobra Venom Test. R. B. H. Gradwohl, St. Louis.

Report of Committee on Investigation of Trachoma. John Green, Jr., St. Louis.

Vaccination: Illustrated with Lantern Slides. Joseph Grindon, St. Louis.

The Relative Position of Medicine in Modern Therapeutics. O. B. Hall, Warrensburg.

Title to be announced. W. E. Harrell, St. Louis.

Experimental Work on Anti-Rabic Immunization with Desiccated Virus. D. L. Harris, St. Louis.

Chronic (Recurrent) Septic Endocarditis. L. H. Hempelman, St. Louis.

Title to be announced. C. M. Ketcham, Carthage.

Clinical Methods: The Eye. P. I. Leonard, St. Joseph.

A Plea on Behalf of the Unborn. T. F. Lockwood, Butler.

Cancer: Illustrated with Lantern Slides. F. J. Lutz, St. Louis.

Vaccination Treatment of Skin Diseases. Halsey M. Lyle, Kansas City.

Medical Economics. A. H. Madry, Aurora.

Treatment of Gonorrhea. John W. Marchildon, St. Louis.

Erythema Nodosum. M. H. Moore, Dearborn.

Insanity and Some of Its Managable Causes. M. P. Overholser, Nevada.

A Case of Double Chancre and Gonorrhea with Confrontation. Thomas M. Paul, St. Joseph.

Social Aspect of Gonorrhea. Ferdinand Schreiman, Concordia.

Remarks on the Treatment of Cutaneous Epithelioma. C. D. Scott, St. Louis.

After-Treatment of Fractures. Carroll Smith, St. Louis.

Title to be announced. N. E. Terry, Springfield.

The Eye an Index to Diseases of the Nervous System. Flavell B. Tiffany, Kansas City.

Training of Physicians for Service in State Hospitals for the Insane. H. Unterberg, St. Louis.

Habit as the Cause of Many Constitutional Diseases, and How to Overcome It. C. Walker Watts, Fayette.

### *Surgical Section*

Hypertrophy of the Prostate Gland. Symposium:  
1. History, Etiology, Pathology and Symptomatology. W. T. Elam, St. Joseph.

2. Operative and Pathologic Specimens of Hypertrophied Prostates; With Methods of Examination and Operation in Prostatic Obstruction. Illustrated with Lantern Slides. Bransford Lewis, St. Louis.

3. The Present Status of Perineal and Suprapubic Prostatectomy. Jacob Block, Kansas City.

Surgery of the stomach. Symposium:  
1. Carcinoma of the Stomach. J. F. Binnie, Kansas City.

2. Gastrojejunostomy: Indications and Technic. Willard Bartlett, St. Louis.

The Value of Conservative Treatment in Tuberculosis of the Bones and Joints. Nathaniel Allison, St. Louis.

Intestinal Obstruction Resulting from Malignant Growths in the Jejunum; Report of a Case. F. W. Bailey, St. Louis.

The Roentgen Ray in the Treatment of Post-Operative Sarcoma. W. L. Brosius, Gallatin.

Intestinal Obstruction Due to Gall-Stones. John Young Brown, St. Louis.

Popliteal Aneurysm. John I. Byrne, St. Joseph.

Title not announced. Wm. T. Coughlin, St. Louis.

Decompression Operation for Hemiplegia. L. J. Dandurant, St. Joseph.

Further Observations upon Membranous Pericentesis and Allied Conditions in the Ileocecal Region. Jabez N. Jackson, Kansas City.

The Present Status of the Cancer Question. Report of the Cancer Committee. F. J. Lutz, St. Louis.

Surgery of the Female Urethra. Fred. J. Taussig, St. Louis.

The Significance of Pain in Acute Thoracic Conditions. Chas. H. Wallace, St. Joseph.

## GRAND RIVER ELEVENTH DISTRICT MEDICAL SOCIETY

The Grand River (Eleventh District) Medical Society held its annual meeting at Salisbury in conjunction with the regular meeting of the Chariton County Medical Society, March 14. There were twenty-two members and invited guests present. Two sessions were held, one at 2 p. m. and one at 8 p. m., with a dinner at 6 o'clock to fortify the physical frame.

Without doubt this meeting will be long remembered by everyone whom good fortune permitted to attend. All the papers were highly meritorious and each aroused an animated and profitable discussion. Two of the papers were specially notable and will attract wide attention when they are published as they contain elements that may throw new light upon unsolved problems; one was by Dr. C. B. Clapp of Moberly reporting a case of ovarian pregnancy, the other by Dr. Woodson Moss of Columbia describing a case of status lymphaticus. Still another paper stepped out of the narrow lines of former days when the subject of insanity was treated; this was by Dr. G. Wilse Robinson of Kansas City, on "Causes and Prevention of Insanity." The society will request the State Medical Association to send reprints of this paper to certain sociological societies, teachers and others, for the instruction of the laity. The proceedings in more detail will be published in the next issue of the JOURNAL.

## MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI

The Medical Society of City Hospital Alumni, St. Louis, held its regular meeting on Thursday, March 7, in the Auditorium of the St. Louis Medical Society. The program consisted of a paper on "Pleural Vomica," by Dr. Elsworth Smith, and a historical sketch, "Paracelsus (Theophrastus Bombast von Hohenheim) Illustrated with Lantern Slides," by Dr. Robert E. Schleuter.

## GREENE COUNTY MEDICAL SOCIETY

### MEETING OF JANUARY 8

The Greene County Medical Society met in regular session January 8, with the president, Dr. D. U. Sherman, in the chair and twelve members present.

The following committees were appointed for the ensuing year:

Program and Scientific Communications: Drs. W. P. Patterson, H. A. Lowe and J. E. Dewey; Public Health and Legislation: Drs. E. F. James, C. E. Fulton and T. A. Coffelt; Library: Drs. J. R. Boyd, O. L. Peak and U. F. Kerr.

Dr. J. M. Potts was elected a member of the Society. The treasurer made his report which showed that the Society had managed to spend all the money it collected during the year.

The president read his annual address entitled "Scientific Work in Medicine," which was instructive, businesslike and entertaining.

### MEETING OF JANUARY 23

The Society was called to order by the vice-president, Dr. S. W. Tickle. Twenty-four members and three visitors were present.

The subject for the evening was a symposium on peritonitis. Dr. C. E. Fulton spoke on the etiology and pathology of the disease. Dr. Reinhoff reviewed the symptomatology; Dr. Terry discussed the treatment, both surgical and medical; Dr. Fortner spoke of the prognosis and complications.

### MEETING OF FEBRUARY 9

On February 9 a banquet was tendered the members of the Society by the president, Dr. D. U. Sherman, at the Metropolitan Hotel. About fifty members were present. The following toasts were offered, Dr. Terry acting as toastmaster: "The 22nd Century Doctor," Dr. W. M. Smith; "The 18th Century Doctor," Dr. J. E. Dewey; "The 1st Century Doctor," Dr. J. R. Boyd; "The Good Doctor," Dr. B. F. Fortner; "The Doctor's Recreation," Dr. T. A. Coffelt; "The Mistakes of Moses," Dr. D. B. Farnsworth; "The Doctor's Standard," Dr. W. A. Camp; "Medical Heroes," Dr. C. E. Fulton; "Our State Hospitals," Dr. F. B. Fuson; "The Doctor and the Pedagogue," Dr. J. R. Roberts.

### MEETING OF FEBRUARY 23

The subject for discussion at this meeting was cerebrospinal meningitis.

Dr. Fuson spoke on the etiology of the disease.

Dr. Potts spoke of the pathology, of the technic of making the lumbar puncture and obtaining the fluid for microscopic examination; a procedure that should be followed in every suspected case.

Dr. Lowe spoke on the symptomatology and diagnosis. The symptoms were given in detail and a very clear picture, clinically, of the different types of the disease was portrayed. He laid special stress on the microscopic examination.

Dr. Patterson spoke of the treatment. He stated the serum treatment is the only rational treatment; all other measures being of no avail whatever. He referred to eight cases in our own city recently, six of whom were treated with the serum, two were not. The two which were not treated with serum died, while



only one of the six serum treated cases died and in this case it was not used until a few hours before death.

Dr. Dewey spoke of the sequellæ, stating that partial or total deafness was one of the frequent sequels following the disease.

THOS. O. KLINGNER, M.D., Secretary.

### MONROE COUNTY MEDICAL SOCIETY

#### MEETING OF JANUARY 25

The reorganization of Monroe County Medical Society was accomplished at an enthusiastic meeting held in Paris, on January 25. The Councilor of the district, Dr. C. H. Dixon, and the president of our Association, Dr. R. H. Goodier, who is now a resident of Monroe County, were present and by their description of the advantages of regular and constant attention to county society meetings, added very largely to the interest of the meeting.

The following were also present: Drs. H. G. Payne, F. H. Carver, F. M. Moss, Thos. B. McMurry, T. B. Loyd, M. R. Nolen, W. T. Bell, C. H. Dixon, M. E. Leusley, Robt. H. Goodier, Thos. Nugent, J. Q. Cooper and E. W. Guilford.

The following officers were elected: President, Dr. H. G. Payne, Paris; secretary, Dr. F. H. Carver, Madison; treasurer, Dr. F. M. Moss, Paris.

Meetings will be held on the second Tuesday in each month.

#### MEETING OF FEBRUARY 13

The Society met at Monroe City with the president, Dr. Payne, in the chair.

Dr. Payne presented a patient who was examined by the members and the condition discussed.

Dr. M. E. Leusley read an interesting and instructive paper on gonorrhea, its treatment and prevention. This brought forth a very lively discussion.

Monroe county now has thirteen members and we are in hopes that we will soon have one of the banner county societies of the state.

F. H. CARVER, M.D., Secretary.

## BOOK REVIEWS

SOME BIG GAME HUNTS. A H. Cordier, M.D., Kansas City, Press of Union Bank Note Co., Kansas City, Mo.

This volume consists of the record in easy conversational style, of a series of hunting expeditions extending from Texas to Alaska. The records are well worth reading, and as usual in such fascides the unfolding of the individualism of the narrator develops the most interesting study. Paper, typography and general make-up, though modest and unassuming, are creditable; the illustrations are sufficient. A fairish number of errors in orthography, punctuation and composition may be eliminated in subsequent editions by a more rigid proof-reading. A graceful thought has led Dr. Cordier to offer this record of personal exploits in dedication to his wife.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Vol. IX, Skin and Venereal Diseases. Miscellaneous Topics. Edited by W. L. Baum, M.D., Harold N. Moyer, M.D. Series 1911, Chicago. Year Book Publishers. This number \$1.25.

The contents of this number are classified under two sections. Section I: Constitutional relations of the dermatoses; therapy of the dermatoses; gonorrhea and chancroids; syphilis and allied diseases, and genito-urinary medicine and surgery. Section II: History of medicine; insurance; medico-legal questions; sociology and miscellaneous topics.

## BOOKS RECEIVED

THE PHYSIOLOGY OF FAITH AND FEAR OR THE MIND IN HEALTH AND DISEASE. By William S. Sadler, M.D., Professor of Physiologic Therapeutics, The Post-Graduate Medical School of Chicago, etc., etc. Svo. pp. 580. Illustrated. A. C. McClurg, Chicago, 1912. \$1.50 net.

A TREATISE ON TUMORS. For the use of Physicians and Surgeons. By Arthur E. Hertzler, M.D., of Kansas City, Mo., Assistant Professor of Surgery in the University of Kansas. Octavo, 728 pages, with 538 illustrations and 8 plates. Cloth, \$7.00, net; half Persian morocco, gilt top, de luxe \$9.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

A HANDBOOK OF PRACTICAL TREATMENT. By many writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Penn., and O. A. J. Kelly, A.M., M.D. Vol. III. Cloth. pp. 1095. Illust. Phila., W. B. Saunders Co. 1912. \$6.00 net.

SEX HYGIENE FOR THE MALE AND WHAT TO SAY TO THE BOY. By G. Frank Lydston, M.D. 8 vo. pp. 304. Cloth. Illustrated. The Riverton Press, Chicago, 1912. \$2.25.

RECENT METHODS IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS. (The Wassermann Reaction and Ehrlich's Salvarsan, "606"). By C. H. Browning, M.D., Lecturer on Bacteriology in the University of Glasgow, and Ivy McKenzie, M.D., Director, Western Asylums Research Institute, Glasgow. Octavo, 303 pages. Cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

MICROSCOPY, BACTERIOLOGY AND HUMAN PARASITOLOGY. By P. E. Arehinard, A.M., M.D., Bacteriologist, Louisiana State Board of Health and City Board of Health, New Orleans. New (2d) edition, thoroughly revised. 12mo, 267 pages, with 100 engravings and 6 plates. Cloth, \$1.00 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

## ANNOUNCEMENTS

W. B. Saunders Company have just issued a new (16th) edition of their illustrated catalogue which describes some forty new books and new editions published by them since the issuance of the former edition.

This edition also contains an illustration and description of Saunders' new building, now being erected on Washington Square, Philadelphia's new publishing center.

Any physician can obtain a copy free by addressing W. B. Saunders Company, 925 Walnut Street, Philadelphia.

Funk & Wagnalls Company have secured the American rights to "A System of Surgery," edited by C. C. Choyce, Dean of, and Teacher of Operative Surgery in, the London School of Clinical Medicine (Post-Graduate), etc. J. Martin Beattie, Professor of Pathology and Bacteriology and Dean of the Faculty of Medicine in the University of Sheffield, is the Pathological Editor of this important new work.

It will be published in three octavo volumes and profusely illustrated with colored, black-and-white and text illustrations. Each branch of surgery is treated by the foremost specialists in that particular branch in Great Britain so that the work will really comprise the whole field of surgery from the viewpoint of the foremost British practitioners.

Volume 1 will be ready about the middle of April and the remaining two volumes will be published about Autumn, 1912. The price of the work will be \$21.00 per set.

# THE JOURNAL

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E. J. GOODWIN, M.D.,  
EDITOR

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A. W. McALESTER, Jr., M.D.  
M. A. BLISS, M.D.

### FIFTY-FIFTH ANNUAL MEETING, SEDALIA, MAY 21-22-23

PROGRAM, PAGE 444. WILL YOU BE THERE?

#### ORIGINAL ARTICLES

##### THE USE OF RESTRAINT IN STATE INSTITUTIONS FOR THE INSANE WITH SOME SUGGESTIONS FOR ITS REDUCTION

E. H. TROWBRIDGE, M.D.

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ST. JOSEPH, MO.

Advancement along the lines of treatment for mental diseases is slowly but surely progressing in the civilized world of to-day, and yet with all our modern methods of treatment along this line one branch is grossly neglected, at least in certain sections of our country, and that is the non-use of mechanical restraints. To one who has had even a limited experience in non-restraint methods, the frequent resort to mechanical restraint as a method of treatment and control in various institutions occasions considerable surprise.

The question at once presents itself as to why a method used in the distant past is still so prevalent in this great age of progress. Do we still believe, as they did in the year 1800, that accessions of violence which were said to be controlled and regulated according to the particular period of the moon's age are to be prevented by binding and chaining the patients? Decidedly no. The great problem that confronts us at present is our own local conditions. In England and Japan non-restraint is the rule at present and has been for some time past because they have succeeded in correcting their local conditions; meanwhile we have lagged behind.

What are these local conditions that control such a state of affairs? To my mind the most important cause is habit. Physicians and attendants who have preceded us in the institution have

always used mechanical restraint. It was a quick and easy method to obtain absolute control over the patient who thereafter required very little personal attention. Used continually in the past, it has become the general routine and the mainstay in the treatment of disturbed patients. As a rule we find that the average institution of this country has too few physicians and trained attendants for the number of patients under care. Consequently each patient does not receive as much personal attention as he should, thereby losing much that would be of benefit in his case if otherwise arranged.

Many of our institutions are inadequately equipped with modern hydrotherapeutic apparatus, the real foundation on which to build our treatment of non-restraint. The average attendant, as a rule, has had no training in this method and is unskilled in its operation. This is due no doubt to the lack of training-schools for teaching modern methods of treating the insane. We find that attendants receive but a meager salary for their services and consequently stay but a short time in any one hospital, joining that class of floating population designated as "hospital tramps." Why all this? Because the general public has not become cognizant of conditions as they exist. The state is unwilling to furnish the necessary funds to correct these grievous errors, so we drift along in the same old rut that is worn smooth by those who have gone before, and find few footholds from which we may obtain a new footing to start aright. Here and there, however, throughout the country, we find those who are willing to battle against these odds and with their patients' welfare ever uppermost in their minds, they are striving onward and slowly but surely emerging from the old worn-out rut, making a new path by the aid of modern and humane methods.



Again I repeat, it is surprising that the relics of the past are still with us and in daily use in many of our institutions. It is of common occurrence to see in these hospitals straight-jackets, muffs, cuffs, leather mittens, and last but not least the old lock-bed, which consists of a cage that is locked down over the patient at night. Some of our most modern institutions still cling to the old closed-door system, locking the patient securely in his room at night, wherein he remains until morning. In Missouri a glaring example of this ancient practice exists in one of our newest institutions which has just recently been completed at an enormous expenditure of the people's money. A magnificent institution exteriorly and modern in all respects except for the row on row of heavy, highly polished doors which stand as guards to the rooms wherein the patients are locked at night. Will not any patient treated by these methods, when disturbed, become even more frightened and maniacal?

It is readily seen that by the use of these methods we are able to get along with a smaller staff of physicians, fewer and untrained attendants; but we keep within our income to the detriment of the patients' own welfare.

Can these conditions as they exist at present be remedied? They surely can. With what present means we have at hand, we may do a great and lasting benefit to these patients, and by slowly educating the public along this line, in time funds ample enough will be provided to raise the standard of our institutions and place them on a par with those in other civilized countries of the world.

In your dealings with this class of patients, first and foremost you should teach attendants and nurses the golden rule, which should be the foundation of all our dealings with the insane. Give your own immediate attention to all disturbed patients, as each one is a law unto himself and no two cases can be controlled in exactly the same manner. If possible, decrease your ward capacity and allow not more than thirty patients under the jurisdiction of any one attendant. Throw away your straight-jackets, muffs, cuffs and leather mittens. Burn up your lock-beds. Remove your doors and allow the patients perfect freedom in going to the toilet room during the night.

You say at once, impossible — all control over the patient is lost. This is not so. Hydrotherapy and kindness will take the place of all these and do wonders, much to your astonishment.

By using the following methods I have reduced my mechanical restraints to naught; but I will say that seclusion at times is necessary in a very few cases for short periods. The violent, disturbed patient, after well-applied hydrotherapeutic treatment, placed in seclusion for a time, quiets down nine times out of ten, and usually goes to sleep. Why use the straight-jacket? It will not quiet his screaming or soothe his irritable

mental condition. Instead, it has a tendency to aggravate him and he becomes even more violent and uncontrollable.

For chronically disturbed patients hydrotherapy is most quieting. These patients are, as a general rule, more or less destructive to their clothing. To overcome this I have them wear one-piece suits made of extra strength denim cloth, which is laced up the back. This will suffice for the average case; but if necessary their fingers are wrapped separately with adhesive tape to the second joint; the use of adhesive in this way will also prevent the average patients from digging or scratching themselves.

Again, there is a class of patients who are physically weak, such as the senile demented or failing paretics, who are continually getting out of bed at night and wandering around. To prevent this, use detachable side-boards for the beds, which extend about 18 inches above the mattress, allowing the patient perfect freedom in bed. It is very unusual to have these patients try to climb over the side-boards during the night.

The one class of patients that are hard to handle are the disturbed patients with tendencies for self-injury; but close attention to their case, with well-applied hydrotherapy combined with limited seclusion, will work wonders. Work, such as that on the farm for those who are able, plenty of outdoor air for those unable to work, good, wholesome food, amusements such as dances and moving picture shows will, with the above few suggestions, reduce your restraints and you will have fewer disturbed patients than ever before.

Some will say that on the reduction of restraint your injuries will increase in numbers. This I have not found to be so, but on the contrary my injuries are fewer and patients quieter than ever before.

In concluding, will say that I do not use sedatives or hypnotics in the treatment of my maniacal cases, except in those which may be so badly disturbed that all hydrotherapeutic treatment fails and the patient is fast losing strength and wearing himself out by continuous loss of sleep and maniacal exertions.

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#### DIFFERENTIAL DIAGNOSIS OF ULCERS OF THE NOSE AND THROAT\*

H. CLAY CREVELING, M.D.  
ST. LOUIS

The wonderful activity shown and the great progress made in other fields of otolaryngology naturally overshadows such a subject as ulcers of the upper respiratory tract, especially since the subject has been thoroughly covered by many writers and so little that is new has within recent

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\* Read before the Oto-Laryngological Section, St. Louis Medical Society, November, 1911.

years been presented. Let us bear in mind, however, the much greater frequency of ulcers of the nose and throat than many of the conditions that now absorb our interest, and that often such unusual or difficult conditions are met with that tax our skill and diagnostic technic and we can ill afford to lose interest in this subject. A trivial ulcer may at times assume the dignity of the gravest disease, so how important it becomes when the reverse holds true. A condition that jeopardizes comfort, health and even life itself can never be of minor importance, and a review of this field cannot be out of place.

This subject is so much larger than I at first anticipated that time limits me to a consideration of the most common forms of ulcer only.

I shall consider in order the various regions involved, and bring out the strongest diagnostic points each disease manifests in this region.

I believe it best to avoid discussing all common signs or symptoms that occur relatively in the same degree or intensity. A disease may manifest itself in many different forms in a given region, but the only type I shall consider is the ulcerative.

#### NOSE

The nasal ulcerations I shall discuss are as follows: traumatic, atrophic, syphilitic, sarcoma, carcinoma, tuberculosis and lupus.

(a) I believe the traumatic to be the most common nasal ulcer and I shall discuss the one that I feel to be the most frequent of this type. Its location is typical, being at the anterior end of the septal cartilage, usually at the apex or immediately anterior to a septal crest or spur. The so-called "anterior atrophic rhinitis" or "locus Kiessellbachii" of some writers I believe to come under this classification. The ulcer is usually unilateral, of regular or rounded outline with gradually thinned edges. They may vary from the slightest opacity of the mucosa to a large, deep-seated ulcer to the cartilage or bone, or even through it. Surrounding inflammatory reaction is absent, as is also pain, unless bone or cartilage is involved. Dry scab or crust formation is constant with tendency to bleeding on removal. Having once started, the trouble is aggravated by constant picking of the nose or efforts attempting crust removal. Progress is slow, but nose-picking makes it persistent.

(b) Atrophic rhinitis presents no true ulcers, but we frequently see small superficial erosions occurring on the septum or turbinates. There is no inflammatory reaction or pain, and as they occur only in pronounced cases of atrophic rhinitis their diagnosis is easy.

(c) Syphilitic nasal ulcers are not limited to any definite region, and are usually associated with evidences of syphilis elsewhere.

The *primary lesion* is rare, and usually situated at or near the introitus rather than the deeper nasal regions. Induration is marked and secretion scant. Nasal occlusion pronounced.

Involvement of cervical or submaxillary lymphatics constant and more pronounced than the local lesion would seem to indicate. Course is fairly short and usually followed by secondary symptoms elsewhere. The microscope is here of assistance.

The *secondary lesions* are also rare and usually associated with an acute or subacute coryza that is prolonged and little affected by routine coryza treatment. The lesions are superficial, scattered erosions of gray or yellowish appearance, their opacity being pronounced. Almost constantly associated with secondary manifestations elsewhere. The "therapeutic" and "Wassermann" tests are of value here.

The *tertiary lesions* are much more common and offer the greatest difficulty in differentiation. Induration is marked, with strong tendency to bone or cartilage involvement. Crusting is persistent and marked, with a strong resemblance to an ozena both in appearance and odor. Edges are ragged and undermined, pain severe, and tendency to redness and tenderness of skin over area involved. Extension rapid and loss of tissue great with a strong tendency to deformities. Other manifestations of active or inactive lues nearly always present. History is here of value, and the "therapeutic" or "Wassermann" test of great service.

(d) Carcinoma is relatively rare in the nose and generally occurs after the age of 40. It is usually primary, starting in the anterior part of the nose with a tendency to rapid progress and early ulceration. Involvement of surrounding tissue is marked. The ulcer is deep and ragged and the discharge mucopurulent, streaked with blood. Pain is irregular, but characteristically lancinating. Odor is pronounced. Lymphatic involvement greater in the secondary than the primary type. Cachexia usually noted. The microscope is a final and positive help.

(e) Sarcoma is more frequent than carcinoma and appears much more frequently under the age of 40, sometimes occurring in early childhood or even in infancy. Ulcer is ragged edged with much surrounding infiltration. Progress is slower and pain duller and less than in carcinoma, if soft parts alone are involved. The tendency to bleeding is greater and more severe. The microscope is here a positive essential.

(f) Lupus is rare and essentially a disease of youth. It is confined principally to the margin or introitus, and is usually an extension into the nose from the facial tegument. History and appearance are often of service. Pain is slight, discharge scant, and but little tendency to bleed. The ulcer is superficial, roughly round or ovoid, and its base is strikingly *nodular*. The margin is elevated and when progressive has a serpiginous appearance. A lesion usually presents an active progressive area, an inactive or healed area appearing as a bluish scar, and a scar tissue



formation with a tendency to deformity. The microscope reveals a few tubercle bacilli.

(g) Nasal tuberculosis is rare and the secondary type far more common. Comes on insidiously and usually starts as a rounded superficial ulcer on the anterior end of the septum, which progresses quite slowly. The edges become irregular and indefinite, trailing imperceptibly into the normal mucosa. The ulcer usually remains superficial, and small yellowish granular tubercles may be noted in its base. There is generally a manifestation of tuberculosis elsewhere with constitutional disturbances. The microscope is a positive aid.

The many forms of disease which may manifest themselves in the nose by an ulcer are as follows: glanders, leprosy, foreign bodies, caustics, infectious fevers, acute coryza, herpes, eczema, scurvy, neuroparalysis, diabetes, varicosities, etc.

#### PHARYNX, NASOPHARYNX AND TONSILS

In this region I shall discuss the ulcers of syphilis, Vincent's angina, tuberculosis, carcinoma, sarcoma and lupus.

(a) The *primary* lesion of syphilis is rare and usually frequents the tonsils. Begins as an ordinary sore throat which rapidly increases in severity. Tonsils become greatly enlarged and one tonsil only is, as a rule, affected. Submaxillary and cervical glands become enlarged and painful. The ulceration is usually larger than that of a chancre elsewhere, often involving the entire surface of the tonsil. It is an irregular rounded whitish abrasion with slightly elevated edges. Induration is marked. Little destruction of tissue is noted. The appearance of secondary manifestations elsewhere may aid, or the microscope may reveal the organism.

*Secondary* lues, or the mucous patch, is the most frequent manifestation of syphilis in the throat, and is usually accompanied by other evidences of secondary lues elsewhere. The lesions are usually multiple, and tend to invade the tonsil, faucial pillars and soft palate most frequently. Pain is sharp and most noted on swallowing of highly seasoned food. There is a reddened, sharply defined areola about the ulcer, which is characteristic. This sharp definition of color is striking. The ulcer is rounded, sharply defined, but at times difficult to make out. The whole patch is almost even with the surface and has a peculiar bluish-gray translucency not unlike that caused by an application of stronger silver nitrate. There is no apparent loss of tissue or tendency to spread. Here the "therapeutic" or "Wassermann" test is a positive aid.

The *tertiary* form of syphilis is the most severe, and no tissue is exempt from its ravages. The ulcers progress rapidly in all directions. They may be quite deep, with marked infiltration and reddening of surrounding mucosa which gradually shades into the normal. The ulcers are

sharply defined, irregular in outline, with thickened, undermined edges. The surface is covered with a dirty yellowish deposit of pus, necrotic tissue and detritus. Pain often dull of character, but may be severe. The scar has a peculiar silky striated appearance, quite characteristic, and deformity is fairly constant and sometimes quite severe. Other ocular evidences of lues usually may be obtained as well as a history of primary, secondary or tertiary attacks. It may simulate malignancy so closely as to require the positive evidence of the "therapeutic" test or the "Wassermann."

(b) *Diphtheria* is by some authors classed as an ulcerative process, but I can hardly agree, as the loss of tissue is so slight as to amount to a mere erosion only. Then, too, the process is an exudation—one tending to increase of thickening by deposit rather than a decrease of tissue by ulceration. Exposure to infection, reformation of membrane when removed, physical appearance, age and the microscope usually differentiate the disease readily.

(c) *Tuberculosis* in this region is, of course, rare, if we eliminate that type which affects the hidden tonsillar crypts only. The secondary form is, of course, much more common than the primary, and is usually accompanied by the active constitutional symptoms of a more advanced stage. Pain is severe and sharp, making deglutition difficult. If soft palate is infiltrated, food or drink may pass into the nose on swallowing. Secretion becomes ropy and hard to expel. The ulcers are broad and slowly spread by breaking down of nodules into small individual ulcers coalescing with their neighbor. The base of the ulcer is usually flush with the surface, has irregular, indefinite margins which gradually merge into the surrounding mucosa, and its color closely resembles the pale surrounding mucous membrane. On removing the secretion, a granular, mottled, pink dotted surface is revealed, in which yellowish tubercles may be seen. The microscopic finding of tubercle bacilli is, of course, positive.

(d) *Lupus* is rare and, according to Bosworth, quite peculiar and wholly unlike any other ulcerative condition in this region. There is an enormous thickening of the part, both from primary and progressive infiltration, together with a slowly progressive recession or fading away of tissue. The secretion is scant, no pus, no cell proliferation, no necrotic tissue or detritus, and a true ulcerative surface hard to make out. It begins usually on the uvula, soft palate margins or faucial pillars, and extends slowly to other tissues without regard to anatomic boundaries. There is usually a well-defined associated lupus of the skin. Strong effort at repair is going on, as evidenced by scar tissue, even while other parts are active and progressing. Deformity is frequent and pronounced. The mildness of its local, as well as general symptoms, is in strong contrast

to its fellow, tuberculosis. The microscope is final, should a few tubercle bacilli be found.

(e) Plaut-Vineent's angina occurs most frequently about the gums and region of carious teeth, or about the faucial pillars, soft palate and tonsils. The superficial form closely resembles superficial stomatitis or diphtheria. Microscopic differentiation must usually be resorted to, especially should it closely follow or be associated with some debilitating disease. The deeper ulcerative form may closely resemble the ulcer of lues; so here, too, the microscope may be essential. The ulcer is usually unilateral, with sharply defined, somewhat irregular undermined margins. The surface is covered with a grayish-yellow deposit of pus, necrotic tissue and detritus. Progress of the ulcer laterally is quite slow, while its depth may increase quickly. Surrounding tissues are reddened and infiltrated. Salivation, fetor and lymphatic involvement may occur. Following a debilitating disease, progress may be rapid and extreme, simulating a deep tertiary ulcer, but history giving absence of primary infection or other luetic manifestations may be of help. The microscopic finding of the spirillum and fusiform bacilli are, of course, positive when added to our clinical picture.

(f) *Sarcoma* develops quite slowly, and the first symptoms are those of obstruction or mechanical interference with the functions. Its malignancy is greater in the tonsil than in almost any other region of the body. The tendency to ulcerate is not great. The discharge is purulent, ichorous, and often ill-smelling. There is a strong tendency to superficial and profuse bleeding. The cervical tissues are early invaded, showing externally as a dense, hard, nodulated mass. Cachexia is often pronounced, and nutrition interfered with. The ulcers are clearly defined, often deep, with thickened irregular edges. It is seldom that a positive diagnosis can be made without the microscope.

(g) *Carcinoma* occurs usually after the age of 40, and starting in the tonsil, invades other tissues. The most impressive condition about malignancies is the great amount of involvement of other tissues, which is striking in this form. Pain is lancinating and often severe, with a tendency to radiate toward the ear. Secondary involvement of cervical lymphatics is early and marked. Ulceration occurs early—second or third month—is irregular but well-defined. The edges are markedly thickened with a strong tendency to eversion backward on the unbroken mucosa. Fissures occur in this thickened margin while the ulcer surface is whitish and granular. There is a bright red areola about the ulcer with a gradual merging of color into the normal. There is a peculiar feeling of a dense hardness, with lobulation of the mass, that is striking. Tendency to extend to root of tongue, soft palate and cheek is noted much more frequently than in sarcoma. After all, the really safe and sure

diagnostic measure is the microscope, which should always be employed.

#### MOUTH

The ulcerative processes described as occurring in the nasopharynx, tonsils and pharynx may also occur in the mouth, and, as their differential diagnosis is practically the same, I shall avoid repetition, and confine myself to but one class of ulcers which more properly belong to the region of the month.

Of the many forms of stomatitis occurring in the mouth, three types alone will be discussed.

The *first type* is commonly known as "thrush," and may so closely resemble diphtheria as to make diagnosis quite difficult. "Thrush," as a rule, occurs in infants during the milk-diet period, when exposure to diphtheria is infrequent, but where chances of stomatitis are great. Often the pain is so sharp and constant as to be of great aid in diagnosis, or there may be a well-defined inflammatory areola about the erosion. The slow-growing character of this disease is in strong contrast to diphtheria. The microscope reveals the *Oidium albicans* as the dominant organism.

The *second type*, or the so-called "Moellers glossitis superficialis," is most usually confounded with the ulcer of syphilis. The ulcers are angry-looking, moderately deep, with sharply defined margins that are little raised above the surface. Inflammatory areola is noted, which gradually shades into the normal color. The ulcer is round or ovoid with grayish-yellow covering of pus, detritus, etc. Pain is sharp, especially on eating highly seasoned foods. There may be elicited a history of previous attacks, self-limited, with tendency to recur. History may reveal absence of all luetic signs or symptoms, and there may be elicited a history of gastric hyperacidity or derangement. These, with a history of local injury coupled with the evidence of early disappearance on local and gastric treatment, will usually clear up the diagnosis. The microscope does not reveal a definite causative organism.

The third type I shall designate as the "traumatic," and it may closely resemble the ulcer of early malignancy. It is apparently the same condition and runs the same symptomatology as the second type, but its course is much prolonged, and infiltration is present. This, of course, is due to the continuance of the causative irritant. Differentiation is fairly simple, as the tongue margins are most usually involved, and frequently there is found a sharp projecting edge of a tooth, bridge-work or plate corresponding to the point where the ulcer touches while at rest or in motion. Recovery is prompt after the removal of the irritant.

#### LARYNX

Of the regions of the upper respiratory tract, the larynx is obviously the most important, and differentiation of disease more difficult. Recently



Chevalier Jackson and others have, by the great improvements made in direct laryngoscopy, made the task less difficult and more exact.

Of the laryngeal ulcerative processes I shall discuss those of tuberculosis, syphilis, malignancy and lupus.

(a) Tuberculosis may occur as a primary or secondary condition, the former being quite rare. The primary form may lack the general constitutional manifestations, and according to Lake "may not have the laryngeal anemia, and there will be a matter of considerable difficulty in differentiating from new growth or syphilis." Some aid may be derived from the age, elimination of history, or evidences of syphilis, and the failure of appropriate remedies appreciably to clear up the condition. We must consider as positive the local or general reaction of tuberculin, finding of the tubercle bacilli in the scrapings of the ulcer, or the development of tuberculosis in a guinea-pig which has had these scrapings injected into its abdominal cavity.

(b) Secondary tuberculosis usually reveals a focus in the lung and frequently has some or all of the general constitutional manifestations of an advanced phthisis. The patient's physical appearance is often striking. Hoarseness accompanies the gross lesions and is characteristic. The voice is weak and trailing, giving one the impression of a lack of vocal effort or a weakness in forcing the tone out strongly. The pallor of the *laryngeal mucosa* when present is of great aid in differentiation. *Arytenoid swelling* is frequent and may vary in size and appear as a full, rounded, reddish, solid swelling, or be noticeably edematous. These swellings may present irregular, small, superficial, grayish ulcers or yellowish spots of minute points of suppuration. The "turban-shaped *epiglottis*" when present is claimed to be pathognomonic. It is more often red, swollen and ulcerated, usually on its posterior aspect. These ulcers are irregular, superficial and grayish in color. They may, however, be quite deep, eating into the margin or at the base near the cushion. Macroscopic tubercles may be noted as tiny, rounded, isolated, translucent bodies. The *ventricular* bands exhibit both swelling and ulcerations, which in this region are apt to be deep. The *cords* are usually affected in their posterior two-thirds, which is in contrast to syphilis. The ulcers are superficial, irregular, grayish erosions whose edges gradually merge into the color of the surrounding mucosa. The cord may appear irregular or saw-like on its edge, and its surface is mottled. The cord itself appears thickened. Small granulations may appear at site of the ulcer. The tuberculin test may be employed or the microscope reveal the tubercle bacilli. Also a guinea-pig may be injected with the scrapings of the ulcer.

(c) Syphilis of the larynx is less frequent than in the pharynx, and in the milder cases may often be overlooked unless a strict rule of laryngeal

examination of all luetic cases that come under our care be followed.

*Primary syphilis* is exceedingly rare in the larynx, as its anatomic position almost precludes infection save by the use of infected instruments.

The *secondary* manifestation will be discussed as a mucous patch with the same general appearance and conduct as is found in such patches elsewhere, but with the added tendency to deeper erosion due to irritation of the air current. The subjective symptoms are insignificant, and consist chiefly of voice disturbance varying from a mild hoarseness to complete aphonia. There is a peculiar harsh, dry, rasping quality to the hoarseness, with an unimpaired or overstrong effort at voice production. The laryngeal mucosa shows a diffuse inflammatory reaction. The patch may appear in any region of the larynx and has a strong tendency to reproduce itself on an opposing surface in contact. The patch is a raised, grayish, irregular, translucent, fairly well-defined lesion, easily mistaken for diphtheria by the novice. Its thin, translucent appearance, non-spreading character, history of primary infection, or evidence of syphilis elsewhere, and absence of that peculiar pallor and lassitude denoting septic absorption in diphtheria, make the diagnosis easy. Of course the "therapeutic" test and the Wassermann are positive.

The *tertiary* form of laryngeal syphilis may vary from a superficial ulcer of moderate degree to the profoundest necrosis and loss of tissue. The deeper tissues are prone to involvement, with consequent loss of function and great scar tissue deformity. We usually may obtain a history of the primary infection, or positive evidences of healed or active lesions elsewhere. There is a marked general redness of the membranes which at times appear darkly congested. The edema present is much less marked than in tuberculosis, unless cartilage is involved. The ulcer develops rapidly, is crater-like, fairly regular and clean cut, and usually covered with a dirty mass of pus, necrotic tissue and detritus. Pain is also usually less marked than in tuberculosis unless cartilage is involved or penetration is deep. When the epiglottis is involved, the progress is one of caries and erosion, owing to its being fibrocartilage, while the other cartilages of the larynx when attacked are destroyed by necrosis and sequestrum formation. The "therapeutic" test and the "Wassermann" are positive and at times essential.

(d) Lupus of the *larynx* is quite similar to the same disease as manifested in the other regions described, and practically the same methods of differentiation apply. The absence of pain, discomfort, and inflammatory reaction, and the slow progress made, are striking. There is usually a distortion of contour of the affected parts, the lesion appears nodular, dry, and without granulation or necrosis. There is to be seen an active, advancing, serpiginous margin, a healed or inactive area, and a bluish scar formation.

(e) *Carcinoma* of the larynx occurs, as a rule, in the later years of life, and on inspection immediately impresses one as malignant, owing to the greater amount of involvement of surrounding and underlying tissue than in the same relative local lesion of any other disease. Cachexia is marked, but sometimes delayed or absent, while pain is of that characteristic lancinating nature. The breath is offensive and of a peculiar musty and "cancerous" odor. Hemorrhage is slight and rarely fatal. The cervical glands are involved, and there is a feeling, when manipulated externally, as if all the structures between the skin and laryngeal interior were densely matted and infiltrated. The ulcer is irregular, superficial and fairly well-defined, with raised margins that tend to fissure excavation. Mucosa is quite reddened, and discharge seromucous with pus cells and necrotic tissue. Positive differentiation is essentially for the microscope.

(f) *Sarcoma* of the larynx occurs more frequently under the age of 40 than carcinoma, and here, too, inspection gives one the impression of malignancy, owing to the great infiltration and thickening of the adjacent tissues. Pain is less frequent than in carcinoma, as is the involvement of the cervical glands and cachexia. Ulceration appears earlier and is less frequent than in carcinoma. The ulcer is a superficial, irregular, fairly well-defined erosion with a tendency to a frequent and excessive bleeding. It is of a dirty gray color, and the secretion contains pus and necrotic tissue, and is often blood-streaked. Here, too, differentiation is difficult, and the microscope is positive and absolutely essential.

There are many other forms of laryngeal erosions or ulcerations that would be quite interesting and instructive to discuss, but only a mention of some of the causative factors will be made, as time presses me to a conclusion. The ulcers or erosions that may accompany leprosy, acute catarrhal inflammation, small-pox, typhoid fever, erysipelas, chemical caustics, scarlet fever, foreign bodies, etc., are here referred to, and I sincerely trust, if time permits, that some of the gentlemen present will bring out in their discussion the salient features of some of these conditions.

I wish to conclude with the statement that I fully realize the great necessity and, at times, indispensable service of the microscope and other laboratory diagnostic measures; but I feel that they are but a part of a complete whole. Only by the development of the most painstaking, careful and complete clinical picture can we hope to attain the fullest measure of their value. The two are bound inseparably, and the exclusion of one for the other is often a source of error and regret.

Metropolitan Building.

## GOITER: ITS MEDICAL AND SURGICAL TREATMENT\*

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It is presumptions on my part to occupy your valuable time in attempting a treatise on the treatment of that positively eccentric pathologic state commonly referred to as goiter, when the sum total of my experience has been no more than a meager half-dozen cases. When, however, one takes into consideration the fact that there is no known specific for the cure of this perverted condition, supplemented by the additional knowledge that present-day therapeutics has little if any greater potency looking to a cure than did the dried squill, quicksilver and bleeding of Paré more than a hundred years earlier, there is, outside of surgical procedure, little that one can say other than to recapitulate, in part at least, the bibliography of goiter therapeutics, and in addition to give as briefly as possible a general outline of present-day treatment. In doing this one is impressed with the fact that it is wonderfully widespread and diverse.

Pick says that the medical measures are notoriously uncertain, and the multitude of methods which have been suggested for the cure of goiter give sufficient evidence of failure. This is not to be wondered at so much when we consider the fact that the pathologic phenomena are not sharply separated from physiologic processes. A disease that is acute and typical does not require great mental effort or elastic imagination to determine readily the measures of real therapeutic value; but if, on the contrary, the course of the disease is chronic and subject to many spontaneous remissions and exacerbations, it is nearly impossible to reach a just estimate of the value of any plan of treatment. There is perhaps no disease the history of which better demonstrates the truth of these principles than does goiter.

Another factor, and probably the greatest stumbling block of them all in our efforts at solving the problem of specific medication in this disease, is our incomplete knowledge regarding its etiology.

There is much evidence in support of the theory that goiter is a neurosis. Both the cerebrospinal and sympathetic systems are profoundly affected; feelings of restlessness, anxiety and apprehension without cause, and rapidly alternating moods, are very characteristic. Vertigo, cephalalgia and insomnia and even hallucinations or persecutory ideas are not infrequent. Two of the most important and constant symptoms are tissue waste and fatigue, although the latter may and generally does precede the former. Others cite an intestinal infection as the underlying cause. More recently there seems to be

\* Read in the General Session of the Missouri State Medical Association, at the Fifty-Fourth Annual Meeting at Kansas City, May, 1911.



conclusive evidence that points to the thyroid as the offending mass. Beebe and Rogers, whose valuable work along lines of experimental research and whose opinions seem to carry much weight with those who are qualified to judge in such matters, conclude that "the disease is a hyperactivity of the thyroid gland and, whether goiterous or otherwise, the thyroid is the offending factor in a vicious circle." In support of their findings they cite that tremor, nervous irritability, tachycardia, diarrhea, perspiration, fatigue and rapid loss of weight, have all been produced in animals, and also in human subjects, by the administration of thyroid preparations. When, in addition to this, there follows a decided amelioration of these, together with other symptoms not enumerated above, on removal of certain portions of the gland, it seems to me we have almost positive proof that the thyroid is, in fact, the offending mass.

If, then, one can accomplish so much with the knife, why not, you might ask, continue to use it in every case? Why waste so much valuable time in experimenting with this and that drug when with a sharp scalpel and a simple twist of the wrist you can forever put a quietus on cell proliferation and colloid liquefaction?

This question brings us down to the matter of goiter treatment, about which there has been and is much diversity of opinion. Nor do I arrogate to myself the honor of having discovered "something new under the sun." There are, heaven knows, enough remedies such as they are, and whatever success comes from our efforts at alleviating human ills comes from the intelligent administration of therapeutic and hygienic measures rather than from the potency of any particular remedy.

The influence of climate on goiter is a very important factor and should be reckoned with. Many cases, I doubt not, have been benefited by change of climate, particularly those who are predisposed to asthma, hay fever or tuberculosis; but while such might be the truth, I do not wish to be understood as favoring a high altitude in these cases, for my observations along that line, while limited, have been that high altitude is detrimental to exophthalmic patients. Aside from climate, a change of residence sometimes is beneficial as favoring mental rest.

Suggestion is another factor that contributes no small part to success in therapeutics of this disease, the exophthalmic type being extremely susceptible to its influence. In order, however, to obtain the most brilliant results from that source, one must ply the suggestions in a most convincing and intelligent manner.

*Rest.*—It seems to me that rest, both physical and mental, would naturally suggest itself as an all-important aid in the treatment of goiter. These patients suffer from malnutrition and rapid loss of flesh; profuse perspiration is characteristic, with sometimes vomiting and diarrhea;

dyspnea is a late symptom, but pycnocardia an ever present symptom with a pulse-rate varying from 90 to 180 will bring weakness and that tired feeling to the strongest sufferer.

Rest, therefore, is of prime importance, but all patients do not require the same degree of rest. That, and the best methods of obtaining rest, I leave to the judgment and good sense of those in attendance.

*Diet.*—Due regard for a proper diet is of as much importance in this as in other diseases, and, ever mindful of the fact that malassimilation is one of the prominent conditions to deal with, I sometimes think we do not give this phase of the subject the attention it deserves.

It goes without saying that the general hygienic surroundings of the patient should be of the best, and nothing overlooked that would contribute to his peace of mind and general well-being.

One other therapeutic measure, other than the medicinal agents, to which I desire to call your attention, and which seems to arouse some controversy regarding its virtue, is the application of electricity.

Abadie believes that the disease is due to vasomotor disturbance rather than to the thyroid, and therefore the treatment should be applied with a view to the regulation of the vasomotor function. With that in view he applies the electrical current to the cervical sympathetic. Various forms of the electric current have been used with varying successes but, like the administration of drugs, there is lacking that unanimity of treatment that should characterize successful therapy.

Personally, I have had no experience with electricity in the treatment of goiter, but from medical works, journals and contact with fellow practitioners I glean that very good results are obtained in some cases, and brilliant results in others when resorted to in the earlier stages of young subjects only. The theory on which this treatment can hope to bring about a cure is by the production of an artificial fibrosis in the gland, strangling, as it were, the multiplication of gland cells and overproduction of secretion.

More recently the x-ray has come prominently to the front as an aid in goiter therapeutics, and seems to have found favor with many. Mayo seems to favor it in many cases prior to operations. Coming now to a consideration of the question of medicinal agents one finds an almost unending list used from the time of Morgagni in 1761 down to the present and, as above stated, there is a wide difference of opinion as to the relative merits of each. Chief among these as possessing curative value in the treatment of this disease is iodine.

I mention this as the chief medicinal agent because it not only has been proved of value from a clinical standpoint but, also, from a physiologic point of view. Marine and Lenhart have demonstrated the fact that by feeding iodine to dogs with parenchymatous goiter a reversion to the

celloidal state can be produced identical with the spontaneous reversions which are known to occur. It is hardly necessary to state that iodine is used both internally and externally.

Next in importance to iodine, I would place the bromids, either the bromid of sodium or the bromid of potassium. Extreme nervous irritability is one of the most prominent and constant symptoms that we have to deal with in this malady, and what is more natural for us than to turn to these time-tried agents in time of need? As a rule they serve us well. More recently, however, quite a number have advocated the use of hydrobromate of quinine and claim to have obtained most excellent results.

Another characteristic of this disease (exophthalmic type), is the prominence of the cardiovascular symptoms. There is not only a pycnocardia, but the heart sounds are strongly accentuated. The right ventricle seems so violently agitated as to be easily recognized by the left sternal palpitation. In some advanced cases there is even a cardiac dilatation.

These symptoms call for such drugs and measures as will control them, and digitalis internally with the ice-pack applied to the sternum finds general favor.

Altogether I have mentioned just five drugs, and to these may be added iron, arsenic, strophanthus, opium, quinine sulphate, antipyrin, ergot, strychnia, aconite, the salicylates, chromium sulphate, and the Lord knows how many more, that have been used by different ones with varying successes in the treatment of goiter, and in view of the fact that there is so much difference of opinion by so-called careful observers in the use of this and that drug as to its efficacy or otherwise, one can hardly be blamed for coming to the conclusion that no one of them has any direct beneficial or specific action on the disease. Outside the one drug, iodine, which physiologists tell us is a constituent of the thyroid gland and found in combination with the protein body iodothyronin, I doubt if there is another possessing any direct specific action on the disease. But admitting, for the sake of argument, that such be the truth, that in our present knowledge of drug therapy we cannot point to a single one, nor to any combination of drugs having a specific healing action in goiter, does it necessarily follow then that we must "throw physic to the dogs" and give up in despair in our efforts to bestow a blessing on mankind? Shall we meekly admit our inability to cope with this disease and grudgingly call on the surgeon to help us out?

These are questions that naturally present themselves, however humiliating they may be.

Surgery is all right. It is a wonderful science and equally wonderful progress has been made along that line in recent years. But surgery of the thyroid, like that of the brain, the heart and the bowels, is surgery of the highest order, and none but the most skilled and experienced should

ever be called on to perform it, and even then only when every other resource has been exhausted. Surgery of the thyroid has never seemed to enjoy the popularity that was evidenced in operations for appendicitis, nor do I hope that it will.

I do not wish again to witness a period such as that in which the carnage of healthy ovaries, appendages, inoffensive gall-stones, fibroids, etc., was simply appalling. Many of the operations, no doubt, were done honestly and with good intentions, but there was much of it that was useless, conscienceless and done for purely commercial ends. The spirit of graft that seems ever to pervade our ranks is doing much to lower the standard and undermine the morals and ethics of the profession. It is a most disagreeable task for me to speak thus, even though I speak facts.

A timely warning against indiscriminate operations and particularly of operations of the thyroid, it seems to me, is not altogether out of place. There should, beyond question, be some standard of qualification established higher than now exists, that shall protect the people against incompetency and dishonesty in surgeons.

Lest I wander too far in foreign fields, permit me, in return, to call your attention to another group of preparations that have been used, and still are, to a limited extent, in the treatment of this peculiar malady. I refer to that group of bodies prepared from those glands of the body having internal secretion and includes the thyroid, thymus, pituitary, suprarenals, testicles and ovaries. These preparations have been exploited through commercial channels to a very great extent and have been experimented with by clinicians the country over, and the most that can be said of them is that temporary improvement only is noted. Some even go so far as to condemn unhesitatingly the thyroid preparations. The result of my own experience in using thyroid and pituitary preparations was not what I had hoped for.

Finally, I would present for your thoughtful consideration that other class of preparations designated as antitoxic and cytotoxic, and while the fundamental idea underlying these is the same, the preparations are of two different sorts: first, those derived from animals which have suffered thyroidectomy and, second, those derived from animals to which normal or pathologic glands have been administered.

Those preparations which have been most extensively used are the milk — either natural or desiccated — from thyroidectomized animals, the antithyroidin of Moebius, the desiccated blood of thyroidectomized sheep, and more recently a serum prepared by Rogers and Beebe by the use of the nucleoproteid and thyroglobulin from normal and pathologic glands.

Just what the consensus of opinion is regarding the use of these latter preparations I am not prepared to say, but those who are best able to



judge in these matters agree that the theories underlying this work are well grounded.

After what has been said and everything weighed in the balance, it would seem that in the treatment of goiter, simple, parenchymatous, cystic or exophthalmic, surgery has the call. Probably it has. Somehow or other, though, it does not seem to have the proper ring. Rogers and Beebe have catalogued a number of remarkable cures by the use of their serum, and if what has been said of clinicians and those engaged in research regarding the underlying theory of their work be true, may we not hope, at least, that the key to the treatment of this disease be transferred from the surgeon to its rightful holder—the physician?

### PUERPERAL INFECTION \*

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There is no class of practice with which I have to deal, and as a general practitioner doing rural practice I have to deal with nearly all kinds, that I approach with as much fear and anxiety as that of obstetric practice; for I realize the importance and responsibility as to the life of both the mother and the child, and especially that of the mother, who is probably the mother of one or more small children, and I feel that no greater misfortune could befall them than to be deprived of her whose care and instruction mean so much to their future development.

In nineteen years of general practice, during which I have done considerable obstetric work, I have had the good fortune to lose only one case directly in labor; this a case of eclampsia, so I do not so much dread the ordeal of labor as formerly, for these years of practice have given me confidence and I feel that I can successfully deliver almost all my cases.

But the after-treatment and results that many times have followed my cases of delivery, in spite of all the precautions taken, is my biggest bugbear. The greatest drawback to the proper management of labor cases in the country is lack of the necessary education on the part of parturient or husband.

I consider almost two-thirds of my obstetric work as emergency practice, because I have no advice of the event until I am called to attend, in many cases being unacquainted even with either the husband or wife; therefore I know nothing about her physical condition, pelvic measurements, presentation, etc. There might be an infection of the patient already existent of which, of course, I would be ignorant. It is true that gonorrheal infection is very rare in country practice, but it does occasionally happen, and when it

does occur the attending physician finds it only after it is too late to do anything to prevent an extension of the mischief to the uterus, ovaries or tubes.

Puerperal fever is defined as a severe febrile disease which sometimes occurs in the puerperal state, usually about the third day after childbirth. This definition is not specific enough, for in the light of our present knowledge it would be as manifestly improper to call, say, a diphtheritic genital infection in the puerperal woman "puerperal fever" as it would be to call a malarial or typhoid infection occurring during the same period by a similar name. Therefore the gravity of puerperal infection and its rapidity of destruction demand a proper classification of the malady.

The classification as given by Dr. C. S. Bacon of Chicago is as follows: (1) streptomycosis and staphylomycosis (true puerperal fever); (2) colon bacillus infection; (3) pneumococcus infection; (4) diphtheria; (5) gonorrhea; (6) sapremia; (7) puerperal tetanus; (8) mixed infections.

It is evident that in order to ascertain to what class the infection belongs it would be necessary to make a bacteriologic examination of the secretions of the vagina or uterus, and I am also aware that there are comparatively few country doctors that are equipped with the necessary apparatus for such examination; so we are compelled to rely on the objective and subjective symptoms to form our diagnosis, and of necessity it may many times be far from correct; therefore in my short paper I want to say only a few things regarding two classes of infection: (1) streptococcus, or infection from without; (2) sapremia, or the absorption of ptomaines, the products of decomposition of retained placenta, bits of membrane, blood-clots, etc.

It is very important to remember that in the uterine canal always, and the vaginal outlet sometimes, following labor there are surgical wounds subject to contaminating and infecting influences, and demand of us as great surgical precautions as we would give the stump of an amputated leg or arm; for at one time all infections are superficial. There is an opinion among some physicians that a rise of temperature and even a chill occurring about the third day after confinement is due to the establishment of the lacteal secretions, and is therefore physiologic. But I want to contend that the lying-in period should be free from febrile disturbances, and should such condition appear there is some abnormal condition existent. So the question arises when such febrile disturbances do appear: "How are we who have no means of making a bacteriologic examination to ascertain with what class of infection we are dealing?" I believe it impossible to say definitely that it is or is not a streptococcus, staphylococcus, gonococcus or diphtheritic, etc., without a microscope. I have tried always in the delivery of my obstetric cases to watch very closely the condition of the placenta, especially as to whether

\* Read by title in the General Session of the Missouri State Medical Association, at the Annual Meeting held at Kansas City, May 18, 1911.

it comes away readily or whether there be a difficulty in its delivery, and also the amount of the hemorrhage, for almost invariably where there is an adherent condition of the placenta, the discharge will be profuse due to the hemorrhage coming from the placental site; and in such cases there is sometimes, I believe, a very small particle of the placenta adherent to the uterine wall, and if fever should follow, I would think it due to this cause, while if the placenta comes away easily and the lochia is normal in amount and a fever should develop later, I would be inclined to think it due to some infection from without. So I try to find out first, if possible, whether there is anything retained *in utero*; if there is nothing, then I direct my treatment accordingly. If I find an abraded or denuded surface which does not present a healthy look, and I should have any history of a source of infection, say, diphtheria, erysipelas, gonorrhea, etc., I would begin treatment by constitutional medication, using the antitoxin, antistreptococcus serum and local applications with the administration of strychnin sulphate one-sixtieth to one-fortieth grain every four hours, and quinin sulphate 3 grains with salol  $2\frac{1}{2}$  grains; and I think I have had excellent results with the administration of the specific echinacea in doses of from 15 to 20 drops every two hours during the day. Formerly I gave whisky and brandy, but I think the strychnin a much better stimulant and prefer its use. Some opiate is almost necessary to control the restlessness and I usually have best success with Dover's powder. Small doses of calomel are also often of value to keep the secretions of the body active. In former years, in treating these cases, I was so anxious to do something that I was always using the interuterine douche from once to twice in the twelve hours, using a solution of carbolic acid or bichlorid; and following such douching the patient would have a severe rigor; temperature many times going to 105 or 106. So no doubt I made the last condition of my patient worse than the first. Vaginal irrigation under this form of infection may be done without harm, but the intrauterine does no good and may do irreparable harm. Intrauterine drainage and irrigation in cases of retained particles *in utero* is a most important surgical procedure, but it should be employed logically or with a proper regard for the mechanical principles involved in the attainment of the ends sought. So if the conditions inside the uterus are such as to demand drainage in the true sense in which the word should be used, a gauze tampon or even a gauze wick does not meet indications. The capillary action of gauze is incapable of conveying off, under any circumstances, more than the thinnest fluids and even those only for a short time, as the meshes of the gauze become filled and its capillarity is destroyed.

The principles of true drainage require that the drain shall be open and free, that it shall be

capable of conveying thick fluids, such as pus, blood, mucus or necrotic debris; and that it be capable also of being flushed or freed while *in situ*. Such a drain is important in the uterine cavity with its known tendency of the internal os to contract and so retain within the uterus putrescible or infected material. A free drain adapted to flushing and capable of conveying thick fluids is a necessity. Such a tube or rubber drain has been devised by Drs. Wetherill and Glasgow, being made of rubber tubing of the size adapted to the requirements of the case in hand; depending on the pressure it must withstand from without; its greatest advantage is that it may be placed once, and once only, with due precaution against infections, and through which the drainage and flushing fluid may always flow from within outward. The flushing may also be done by the nurse and as often as may be necessary, while with the old form of douche tube the doctor had always to be present to do it.

The antiseptics used in the douche should be of the mildest kind, in fact sterile water or sterile normal salt solution, diluted alcohol 25 per cent. or very weak solution of iodine are all that is necessary; as the greatest good is to the mechanical effect of the water. If there should be a possibility of any retained debris that is adherent and which will not douche away, a curettage should be done. All of the above treatment will apply equally to miscarriages and abortions. I believe that the best treatment for any kind of puerperal infection lies in proper prophylaxis. But the observance of these rules are almost impossible in rural obstetric practice; as for instance Dr. Jessie Shoup, Washington, D. C., in *Monthly Cyclopaedia and Medical Bulletin*, October, 1910, says: "The puerperant is presumed to have been prepared at the beginning of labor by having the hair over the vulva either cut short or shaved, given a general scrubbing bath, the genitals particularly having been cleansed with soap and water and a special care being given to cleaning the inside of the thighs and the folds and creases of the skin, and from the waist down a bath of a 1-to-1,000 bichlorid, and the vulva kept covered with a towel wrung out of a solution of 1-to-1,000 of bichlorid."

Now should a country doctor attempt such proceedings, I think the people would think he was daffy and he would not do a very great amount of obstetric practice in his neighborhood. So while we cannot follow out this technic, there are many things that we ought to observe in our work:

1. Perfect cleanliness in everything that comes in contact with the patient's person, especially the hands of the obstetrician, and as it is almost impossible to render the hands aseptic, I have made it a rule in recent years to always wear sterile rubber gloves; although it is some expense to always keep a sterile pair on hand. I have



found since using them that I have had but very few, if any, cases of puerperal infection.

2. Needless examinations.

3. The removal of all soiled clothing, etc., and cleansing of vulva and person after delivery.

4. The practice of gentle massage of the uterus through the abdominal wall to facilitate the removal of blood-clots, etc.

5. The use of vulval pad or dressing to be changed when soiled.

6. Repair of all tears.

7. Dose of castor oil and turpentine on the third day.

8. Patient to assume the upright position to evacuate bladder and bowels, after first twenty-four hours if normal labor.

9. Undue haste in delivery.

10. Two weeks in bed.

#### THE COUNTY SOCIETY: WHAT IT SHOULD DO TO ADVERTISE THE QUACK\*

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Since we are here assembled for the interest of both the medical profession and the people whom we serve, it is our duty to consider any question that is of vital interest to both.

For convenience sake we will divide the profession into two classes, one the ethical physicians, the other the unethical or the quacks. A very good, short definition for a quack is a dishonest doctor. The doctor that misrepresents the facts to the patient for financial gain is a quack, regardless of where he hails from.

While it is true that we belong to the most noble profession on the face of the earth, nevertheless it is also true that within its ranks is this undesirable element, the quack; then is it not our duty to purge the profession of this undesirable element and by so doing protect the public? This cannot be done by our present laws, nor can we get laws passed that will protect the people. This was plainly demonstrated at the meeting of the last legislature by the defeat of the bill giving the State Board of Health more power in epidemics of contagious diseases, and to regulate the giving of expert testimony—questions that were of vital interest to every citizen of the state of Missouri. The literature which was sent broadcast over the country during that time shows the power behind the throne.

I received during the last session of the legislature tracts from the Citizens Defense Committee and the National League for Medical Freedom, the most ridiculous, untruthful and misleading stuff I ever read. In it was a picture of one of the leading business men of Kansas

City. They seem to have almost complete control of the press of this country; for instance, let a man from this city come into our part of the country and sell to someone a tract of land in Kansas or Nebraska from a false deed and abstract and obtain money on it, and the press of this country will follow him to the ends of the earth; but let one of the quacks from this city who advertise in the daily press come out there and he can promise, bargain and guarantee to cure some case of an incurable disease, obtain the man's note for a few hundred dollars, sell it to the bank before he leaves town, send the party some nasty, nauseating medicine that he cannot take, and when the man pays the note at the bank that is the last you ever hear of it. The editors of the papers in which the quacks advertise will advise their readers, the very people whom they depend on for the circulation of their paper, to patronize them.

This question, gentlemen, is before us: we have to meet it, we cannot get around it; then what shall we do with it?

*The Public Does as It Is Taught.*—The quacks teach the public through the press, and through their booklets and circulars. Teach them what?

The medical profession is ridiculed, maligned, lied about, misrepresented and "knocked" in every possible manner.

The doctor is classed as an ignoramus, uneducated, a faker and grafter; and the public does not hesitate to attach any name that will disgrace an ethical physician. The dignity of the "Doc," as they call him, is conspicuous by its absence, and the vast majority of people consider it their religious duty to dock the "Doc" whenever they can.

Go abroad to England, Germany or even to Australia and New Zealand: the physician is there respected, looked up to and the roughest character on the street will touch his hat to "the Doctor."

Since our national association has introduced the open session which has somewhat aroused the interest of the people, it appears to me that through this channel will our opportunity come whereby we may teach the public and by their aid we may succeed in eliminating this undesirable element from our profession.

I know of no better way for the profession to instruct the public than through the county medical society, especially in the rural districts. Let the society hold its meetings in the different towns in the county, hold an open meeting, announce it, advertise it and get as many people out as possible: have one of the members from some other town in the county read a paper on the subject of the "Family Physician and the Quack," giving the paper any title you may choose; describe the family physician's life with all its ups and downs, the long stormy midnight rides, death-bed scenes, etc. Then take up preventive medicine, in which the family physi-

\* Read in the Medical Section, Fifty-Fourth Annual Meeting Missouri State Medical Association, Kansas City, May, 1912.

cian works without compensation, refer to what has been done to small-pox, diphtheria, etc.

Then, on the other hand, take up the quacks, describe them as dishonest physicians, and explain that the reason we are fighting them is on account of their dishonesty; explain why the family physician does not advertise and the reason the quacks do. Explain to the people that the quack is an undesirable element in our profession and that we are trying to eliminate him; and that the object of this meeting is to instruct the people so that they may know how to choose between the ethical physician and the quack.

Instruct them to choose their family physician with great care, for it is a life and death matter; that the man in whose hands you place your life and the lives of your family should be a man of ability, honest and upright in all his dealings. Then to choose a man that takes an active part in his county medical society, who keeps his person and his office clean and tidy and in whose library you often see new books. When once the choice is made, stay with him until you have good reason to change. Go to him for advice, for there is no one more ready and willing to stop and listen to you than your family physician. Show him the utmost respect, show him that you appreciate his kindness, for there is no one on earth that will appreciate it more than a hard-worked physician. Remember that he is human, that he is a citizen, that he lives among you, that he has a father and a mother, probably brothers and sisters, and maybe a family of his own.

After the reading of such a paper let every member present in his discussion relate some case wherein some unscrupulous quack has, by his representing himself as a specialist and by his promises of sure and permanent cure, gulled some poor person out of maybe the last cow, just before they passed away with some incurable disease.

While teaching the people how to choose between the honest physician and the quack, we may at the same time instruct them how to choose between the man who attends the society meetings and keeps up with the times, and the man who never goes to a society, who takes no medical journals, who buys no new books, has a dirty, filthy office, is found either on the street loafing, telling funny stories, or in a card game or a game of checkers. Teach them how to differentiate between the two and in so doing it will aid in getting men into our societies who now pay very little if any attention to their county society meetings.

In organization there is union, and in union there is strength. Teach the people that it is for their interest we are working in our society meetings, that it is for their interest we leave our homes and our business to attend these meetings; then will they and their representatives be in a position to vote intelligently on medical questions when they come up in our legislature, for we must remember the public does as it is taught.

## THE COUNTY MEDICAL SOCIETY; ITS USE TO THE PROFESSION AND THE PUBLIC AND THE TECHNIC OF ITS ADMINISTRATION \*

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That the county medical society is in itself a postgraduate school to all who regularly attend it and who carefully study the subjects presented before it is a fact so universally accepted as to scarcely warrant mention here. That the meeting together of the many physicians intent on a common purpose and imbued with common aspirations causing them to become not only acquaintances but oftentimes very near friends is also conceded to be the most effective manner of bringing about good fellowship among the profession. Thus it would appear that two very important functions are served by the county society: the first is that it educates the profession, the second that it develops harmony within its ranks. How often have facts garnered at the county society meeting come to our assistance when at the patient's bedside. How many physicians date the acquaintance with their most intimate professional friends back to the county medical society meetings. We cannot all, I regret to say, be fast friends or even acquaintances, for one of the most bitter thrusts that a physician can possibly give another is to reply, when asked by a patient if he knows Doctor So and So, "I do not," or "I have never heard of him," a reply which is often interpreted to mean "He is of little consequence among the profession, hence I do not know him." But these uses of the county medical society are egoistic; they benefit mainly and primarily, at least, the physician; and if the society had no other points of value than educating the physician and promoting friendship, its existence would be many times warranted; but there are other reasons for its existence.

Since the members of the county medical society represent the most learned and influential physicians in the county, and since the county society has for its aim not only the furtherance of education in its own ranks but the education of the public, it is not to be wondered at that the society should be considered altruistic in motives and a benefactor to mankind. Whether it acts directly in improving insanitary conditions of its home county, or by its representatives brings about legislative reforms pertaining to public health, it matters not. Whether it attacks the milk-supply of a large city and helps to force the correction of insanitary conditions, whether it helps to prosecute abortionists and medical fakers, or whether it urges on its congressmen the establishment of a national department of public health, it is all the same; the motive is purely

\* Read at the annual meeting of the County Society Secretaries Association, Kansas City, May 16, 1911.



altruistic and the public is benefited, though it oftentimes fails to properly interpret the society's actions; branding them as egoistic.

One year ago the Jackson County Medical Society framed a fly-screen ordinance which prohibited exposing fruits and vegetables for sale without having them properly screened. The ordinance was presented to the city council. Certain commission men foresaw ruin and raised a strong protest against it. The Kansas City press took up the fight in favor of the ordinance, it was passed and is now a law.

Last Tuesday evening the county medical society started, through its milk commission, a fight for pure milk for Kansas City, and several reporters were seen in the audience. The next morning the full report of the meeting was printed in the daily press. The fight was on, and to-day, thanks to the efforts of the society and to the Kansas City press, which can always be relied on to fight for the health of the city, the evils are corrected and ten milk inspectors now successfully carry out the work which has heretofore been expected of one. In addition to this the subject of impure and dirty milk has been gone over by the press and threshed out so thoroughly that should dirty milk escape the milk inspectors' detection it yet has good chance of being detected by the housewife and mother before it reaches the nursing-bottle, for she has been told repeatedly that formaldehyd and filth in milk are dangerous: that the milk should be cold when delivered, and that if she has reason to believe the milk is not up to the requirements she can ascertain the truth by sending a sample to the city chemist, and if the milkman is guilty he will be made to suffer.

The Jackson County Medical Society is only one of the many county medical societies which are standing as sentinels to guard the public health throughout the districts in which they are located. The St. Louis Medical Society and others, I am told, have been equally active and have brought about many sanitary reforms.

Before leaving this phase of the subject, I wish to emphasize the necessity of having the cooperation of the daily press. Let them know your doors are open to them—that you are working for what is right and just, and that you must have their assistance. Many subjects they care nothing about, but admit them at all times and let them select what they want. I believe in educating the newspaper reporter, for one of them can either direct or misdirect more people than can the entire society. It is hard to review a scientific program in the press without making it appear an advertisement to those taking part therein, but this feature can be largely overcome by coaching the reporter, who will soon learn to write the practical features of the meeting without using names. I once shunned the reporters because I was afraid the members of the county society would receive too much notoriety. I have

since changed my views. Arrangements have been made by our county society whereby *The Journal of the American Medical Association* is sent regularly to each of the three daily papers in Kansas City. Some of them receive the *Weekly Bulletin* of the society, and I believe the reporters who visit our society understand that they come with a warm welcome. Under this régime I am frank to confess that whatever is written regarding the meeting will be infinitely more correct and less notoriety will be given the individual members than if the reporter was refused admittance and compelled to glean information of the meeting from someone else.

In order that the work of the society may be made as simple as possible, and yet complete, a definite technic should be adopted. The time for paying the county medical society dues should be from November 1 to December 31 of the year preceding the year for which they are paid. In order that the member may avail himself of the legal defense offered by the state society, this payment of annual dues before January 1 is now obligatory. Yet how few of our members understand what the delay of a few days in paying their annual dues may cost them.

Another important feature of the county medical society is its district organization committee. In a large city this committee is imperative. Its duty is to keep in touch with every physician in the county, black or white, male or female, homeopathic, eclectic or regular, reputable or disreputable. The county is divided off into sections and one member is placed in charge of each district. This member keeps a card index system: white cards for members of the society, blue cards for non-members. On these cards are kept the physician's name, address, office and residence, where he graduated, date of graduation, number of state certificate and date of its registration. The chairman of the district organization committee should be a very active society worker. His committee consists of as many members as there are districts. When a physician moves from one district to another, Dr. A. sends card to Dr. B., to whose district the physician moved. All changes in address, deaths, newcomers, etc., are reported to the chairman of the committee, who keeps a large duplicate card index system of the whole district.

One valuable feature of the district organization committee is that it enables the secretary to reach the reputable class of physicians who are not members, and by sending letters, invitations or bulletins induce them to attend, and probably become members of the society.

The main object of the county medical society is its scientific work. To this all movements of the society, regardless of how important, are secondary. Sociability and political organization are of great importance, but the "milk in the cocoanut" is the scientific work. An effort should be put forth to improve from year to year the value of the meetings.

Our society meets weekly. The last meeting of each month is a clinical meeting, at which, instead of papers being read on selected subjects, patients, pathologic specimens, instruments, etc., are exhibited. These clinical evenings are a great success, the attendance is larger on clinical evenings than at any other meeting during the month.

It is of the greatest importance that the program be made out and published several weeks in advance. This gives the members ample time to study the subject under discussion and come to the society prepared to discuss it intelligently. An experience of five years has proved to me that this is the most effective method of securing a scientific program worth listening to. Then, too, if the subject is selected and published several weeks in advance, the effect it will have on the papers is phenomenal. They are more carefully prepared, and the pernicious habit of waiting until within two or three days of the time set for their reading before beginning their preparation is obviated. By all means set your program far enough ahead to insure a careful preparation of your papers.

County medical societies enjoy having visitors occasionally take part in their programs; especially is this true if such a one is of some renown and will prepare an address on some scientific medical subject. To this aim I am going to make a suggestion. Let the county medical societies of the state start a lecture bureau and invite other county societies in the United States to join them. Let us form a circuit, taking in say ten or fifteen cities of the larger class. Let us invite several physicians of renown to cover the circuit, lecturing to the various societies comprising the circuit. The expense would be nominal. New York, Chicago, Philadelphia, St. Louis, Kansas City, Denver and Cincinnati are representatives of the class of cities which could be expected to take part by joining the circuit. Each society could do its part in defraying the expense of the journey, which would be only a little more than the expense of making a trip and delivering a lecture before a single society. Such an engagement would warrant careful preparation on the part of the essayist, for the same paper could be presented to each society in the circuit. An invitation to any physician to visit ten or fifteen of the larger county societies in the United States, and receive a banquet at many of them, would be an honor that would not be considered lightly.

To make our work a pleasure we must delve deeply into it. A member may be lukewarm, but a secretary must be at white heat all the time.

The county society is here to stay—in state and national organization it is a necessity. In further education of the profession and the enlightenment of the public it is indispensable. Give it the full measure of your energy.

## SOME PRACTICAL PROBLEMS IN EAR, NOSE AND THROAT PRACTICE \*

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Although not frequent as a rule in general practice, the occasions are nevertheless urgent where it becomes necessary for the physician to have at hand some simple, yet reliable methods of dealing with certain practical problems in ear, nose and throat practice. Not only does he meet with such problems shortly after the patient has sustained an injury, or attending the intrusion of a foreign body, but as a concomitant or consequent condition of inflammatory local, or of systemic diseases in his practice where the cure appears practically an important and interesting clinical problem, not only for the patient but for himself.

Among the more important ones in this field, let us consider but three to-day: (1) how to heal persistent perforations of the drum-head; (2) how to dispose of hypertrophied postero-inferior turbinates, associated or not with aural symptoms; and (3) how to obviate the tendency to intense spasm of the larynx in removing spiculated, rasping foreign bodies therefrom.

First, the practical problem of how to heal persistent perforations of the drum-head:

Assuming some cases as probably incurable, of course, such as those attending far advanced systemic tuberculosis or other wasting processes, or where the perforation is concentric with the lower extremity of the handle of the malleus, or represents so large a destruction of the drum-head that, with age consideration, reparation is improbable, or where these methods in the hands of qualified experts have already been found unavailing—cases presenting should, unless obviously hopeless, be given an opportunity to secure relief through these methods properly applied.

The problem of healing persistent perforations of the drum-head is most frequently met with in two classes of cases: one following traumatic rupture of the drum-head by violent compression of the air in the external auditory canal from a blow on its outlet; the other, where an active suppurative otitis media has entirely ceased—often through too rapid drying of the secretions with medicines and powders, towards the normal terminus of such an inflammation—in either set of cases, often leaving a persistent and dry perforation.

To deal with the former—those of recent traumatic rupture of the drum-head—in such a way as to induce rapid healing while averting the prolonged exposure of the sensitive middle-ear structures to the deleterious influence of the changes of the atmosphere, avoiding the tympanic suppuration usually marking the reaction of such

\* Read in the Medical Section of the Missouri State Medical Association at its Fifty-Fourth Annual Meeting, Kansas City, May 17, 1911.



sensitive healthy tissues as those of the middle ear to the irritation attending the usual popular methods of active interference in such cases; and in the latter class of cases as well as the former, to deal with the condition in such a way that protection may be permanent for the tympanic contents and the special function of the injured parts restored, with all the joy and advantage that attend the recovery of serviceable hearing; these make the problem practically important to all. And these make it profitable on the part of the independent practitioner to invest the small amount of time and attention necessary to familiarize and equip himself with a few of the more simple and easy but effective methods of accomplishing these ends.

Although not new, the best of these which we are about to consider appear not familiar to physicians generally; and even among specialists themselves, seem practically to have failed of due appreciation and merited popularity. The use of the paper disk, for example, was first publicly suggested to the medical profession by Dr. Clarence J. Blake of Boston, at the first Congress of the International Otological Society, which met in the city of New York in 1876. You will find a description of the method, made at that time, in the Transactions of that society published in 1877 by D. Appleton & Co. of New York, and more recently in an exhaustive treatment of the subject in the conjoined treatise of Dr. Blake and Dr. Reik issued about five years ago by the same publishers under the title of "Operative Otology, Surgical Pathology, and Treatment of Diseases of the Ear." In passing, it may be well to state that this work shows also that in the hands of those familiar with its practical advantages this method of using the paper disk has been found specifically indicated for and applicable to other conditions and problems than that simply of healing perforations of the drum-head.

The method of Blake consists essentially in applying to the perforation a moistened disk of sized ("glazed") writing-paper, a trifle larger in diameter than the perforation. This is effected by cutting out of such paper a disk sufficiently large just to overlap the entire edge of the perforation, moistening it on both sides with sterilized water, normal saline or some slightly more stimulating solution, carrying it to the site of the perforation, without its touching elsewhere, on the tip of a wet cotton-wool brush wound on the extremity of a very slender applicator; applying it to the perforation concentrically; pressing its edge throughout snugly into apposition, with a broad, flat, dry cotton-wool brush; and having the patient carefully abstain from tympanic inflation of any kind or degree for from twenty-four to forty-eight hours thereafter.

Among the principal advantages of this method may be mentioned: that it closes the perforation in such a way that the drum-head is at once by

patching thus wholly restored as a sound-sail—that is, for the reception and transmission of the force of aerial sound-waves entering the external auditory canal; the tympanum is kept constantly and invariably filled with warm, moist air, irrespective of the vicissitudes of the outer atmosphere; the growth of new membrane is stimulated at the edge of the perforation; a splint, or inflexible plane is thus supplied, on which without the otherwise unavoidable pressure, stress or flapping, the growth of new membrane across the perforation takes place steadily and on the normal plane of the drum-head; and the disk serves also as a local stimulant, it may as well be stated, support and tightener so to speak, in like manner, upon loose or flapping parts of the drum-head, even where no perforation of that structure exists.

As evidence of the wide range of its applicability in cases of perforated drum-head, it may be stated in passing that this method in my hands has proved availing to secure union by first intention, in a case where the entire anterosuperior quadrant of the drum-head had been wholly detached and folded away, throughout the entire length of two of its three edges, by a blow of the fist on the ear. After the detached flap had been replaced, it was held there by a Blake disk properly applied which, after healing had taken place thus, was removed with perfect restoration of the hearing, no evidence whatsoever of previous injury to the parts being subsequently recognizable even on careful examination.

In another instance, much to the astonishment of a brother practitioner, it sufficed to heal a perforation in one of his own drum-heads, which had previously persisted in spite of other treatment for fully thirty-five years; in another case where the perforation had already persisted for more than thirty years; and in still other cases—two of them—where the perforation of the drum-head in each case was as large as the end of an ordinary pocket lead-pencil.

Another method of healing such perforations was discovered incidentally through the effort to perfect some appliance for "confining the sonorous vibrations to the tympanic cavity" in cases of "deafness arising from the presence of an aperture in the membrana tympani, which" up to about the year 1848 "was regarded as incurable."<sup>1</sup> This method consists in applying to the perforation some device, such as a rubber disk with controlling wire handle; a wad of wool or of cotton, "fully moistened" with water or some other liquid; or even a dry, absorbent or non-absorbent cotton-wool wad. The rubber-disk contrivance is known as the "Toynbee artificial drum-head"; the "moistened" wad, as the "Yearsley cotton pellet." "Yearsley cotton-wool wad," or "Yearsley wad"; both designed for the relief

1. Joseph Toynbee: *The Diseases of the Ear*, 2nd Amer'n Ed. Blanchard & Lee; Phila., 1865. Chap. x, pp. 187-189.

of deafness attended by persistent perforation of the drum-head. There is, however, no special name yet popular for the method of using the dry cotton-wool wad for the healing of persistent perforations of the drum-head. It is interesting and instructive, that the benefits and possibilities of the latter procedure were discovered through a neglect to observe the rules carefully laid down for the proper practical application of the former, which in 1848 were definitely stated by Yearsley, its originator, in a pamphlet entitled "On a New Mode of Treating Deafness when Attended by Partial or Entire Loss of the Membrana Tympani. Associated or Not with Discharge from the Ear." He says: "A small piece of wool, differing in size according to the case, and fully moistened with water, is introduced through the speculum to the bottom of the meatus, and adjusted superiorly, inferiorly, anteriorly, or posteriorly, according to the situation of the perforation and other circumstances connected with the case"—now please note carefully that he goes on to say—"but care must be taken that the entire opening be not covered, otherwise the experiment will not succeed. It is also indispensable to success that the moisture of the wool should be preserved." (Italics mine!)

Strangely enough it has since been found, through a failure to avoid covering the entire opening and to preserve the moisture of the wool as directed by Yearsley himself, that the contact of the wad, dried, properly pressing or in contact with all parts of the edge of the perforation, which is thus completely occluded, will favor the growth of tissue at the edge of the perforation—possibly as Nature's conservative method of attempting the exclusion or the expulsion of the offending foreign body which we have so rudely introduced.

Reflecting that light contact stimulates while pressure depresses, one can with attention and care through experience mature one's judgment as to the character of the wad and the degree of its pressure against the edge of the perforation, that can for his own purposes be most advantageously applied in any given case presenting; it being my own custom usually, at short intervals, sometimes of several days, to remove the wad for the purpose of examination of its local effects, to note whether it needs more or less pressure, and to replace it with a new one of similar or dissimilar character with or without attendant medication, as specially indicated. The plain, absorbent-cotton-wool wad alone, fewer variable factors being thus injected into the problem, has as a rule proved the most effective and satisfactory in my own experience: it being possible here, as you see, more readily at any time to modify as indicated the effect of this procedure by the introduction into the wad of any desirable medicament, whether in powdered form or in aqueous or oily menstruum.

Still another method of encouraging the healing of persistent perforations of the drum-head is that of applying gently to the edge of the perforation any desired stimulant, usually some one of the many popular silver preparations introduced on an absorbent-cotton-wool brush, a trifle larger than the perforation, wound in globular form on the extremity of a very slender applicator.

An interesting example of the effectiveness of these methods was the case of a young lady, 30 years of age, who, after having been under the care of a physician, a relative, for several days, was referred to me for relief of an acute suppurative inflammation of the left middle ear, of about one week's standing. She complained of pain, deafness, noise, and a hollow reverberation of her own voice in the affected or left ear. Since early childhood, she stated, when both ears had discharged, she had been practically totally deaf to all ordinary sounds in the other or right ear: and but for a hopeful but disappointing consultation with a physician four years ago, and in girlhood, when the left and right ear also discharged, she had had no further treatment for her ear disease.

As this lady was a teacher by occupation, the relief of the deafness of her previously remaining only good ear was a matter of the most serious concern. On examination of this ear, a condition of acute suppurative otitis media was found. There was a very large perforation, apparently of long standing, in the antero-inferior quadrant of this left drum-head, through which mucopus was escaping freely. There was also a good-sized hematoma of the posterosuperior portion of the vibrating drum-head, whose contents were at once released by a small incision. Adrenalin chlorid solution followed by boric acid with salicylate of chinolin was used to reduce the congestion.

On the right, or side of the supposedly hopelessly totally deaf ear, the whole posterior half of the drum-head was found gone, doubtless from destruction of purulent otitis media in childhood: the anterior half of the membrane being tightly retracted, while the lower extremity of the handle of the malleus was firmly attached to the promontory of the inner tympanic wall. The long process of the incus and the parts about and constituting the malleo-incudal articulation were readily and clearly recognized on careful inspection. All parts of this tympanum and its contents appear pale, perfectly dry and almost wholly bloodless and colorless. The tick of a watch in this ear has never been audible, and all tuning-forks give the auditory reaction of "bone-conduction" better than "air-conduction." Only a loud voice close to this ear could be heard; the whisper, unheard. Surgical operation for the removal of the impediments to hearing in this right ear is favored, and will probably be done in the near future.



This case was treated on its variable indications as usual for control of the suppuration, when there was found to persist a perforation of the antero-inferior quadrant of the drum-head, about three-sixteenths of an inch in diameter—a most unpromising case in my opinion at that time as regarded the outlook for closure of such a perforation. Careful coaching, however, with the above-described methods, changing that of disk, wad and stimulant application irregularly as indicated, sufficed to effect entire closure of the perforation within six weeks and five days after her first examination.

On the day following the closure of the perforation, she heard the speech of a male relative using the telephone about 35 feet away at the end of the hall outside the room. The same day she heard for the first time from the distant end of her apartment the sound of a piano, formerly heard but from its adjacent room. Two days later she was awakened in the morning by the sound of passing street-cars, hitherto unheard; and for the first time heard the 7 o'clock a. m. and the 9 p. m. steam factory whistles. Two days later the upper and lower tone limit of hearing for this ear was found normal, and all the tuning-forks from that of 32 up to that of 2,048 vibrations a second, were heard by air-conduction better than by bone-conduction in this ear. From that time on—please note the following statement well—the hearing of both ears has continued to improve, until now she can not only hear a low voice and ordinary whisper with the left or better ear at 25 feet distance; but also at about half a foot distance with the right, formerly wholly useless ear as well. All the abnormal symptoms of the left ear originally complained of have entirely disappeared, and the hearing of both ears still continues to improve. During the past two weeks the hypertrophied inferior turbinate of the right side has been reduced by electrocauterization for relief of obstruction of nasal respiration. After this wound has healed, the incus of the right ear is to be resected or removed, with reasonable prospect of material improvement even if not restoration of a practically serviceable degree of hearing of this right ear, with which as stated she claims to have heard, up to quite recently, nothing since childhood. Later it may be found well to make some further report on the subsequent behavior of this very instructive case.

Another remarkable case which will serve later to illustrate also the second of the practical problems before us to-day, is that of a lady about 42 years of age who, while sleeping, was aroused suddenly in the middle of the night by the quick impact of some large body against the left ear. This proved to be the hand of her sleeping husband, an ardent disciple of Isaac Walton, who, in happy Dreamland, was landing the biggest catch of the season.

She awoke deafened in this ear; and with a feeling of tension, a ringing noise, and an unfamiliar sound of her own voice in it.

On examination next day a perforation about one-sixteenth of an inch in diameter was found in the postero-inferior quadrant of the left drum-head, almost at a level with the umbo or lower extremity of the handle of the malleus, and about one-third its distance from the periphery of the drum-head. This was found in a rather thin portion of the membrane and bore no signs whatever of reaction about it.

A Blake paper disk, three-thirty-seconds of an inch in diameter, was at once applied to the perforation concentrically, with instant restoration of normal hearing for voice and whisper and of natural sound of her own voice.

Eleven days later the disk was removed from the neighborhood of the original site of the perforation, whither it had been carried by the outgrowing and outgoing epithelium of the drum-head; the perforation having healed meanwhile without leaving any mark; and the patient since then has never experienced the slightest inconvenience whatever from her injury.

Singularly enough, this accident had happened in this instance to an ear whose relief from the disabling deafness of "catarrh" had formerly been effected at my own hands by an operation within the neighboring naris—an operation originally suggested and demonstrated to me some time before by one of our own number, Prof. Greenfield Sluder, chief of the department of laryngology, of Washington University, St. Louis—which I have the honor to recommend to-day as a rational solution of our next practical problem:

How to dispose of the hypertrophied postero-inferior turbinate, associated or not with aural symptoms.

This operation as above stated was first demonstrated to me by Dr. Sluder at his laryngologic clinic in the O'Fallon dispensary, St. Louis, on Oct. 18, 1900; and from that time until now, in every such favorable case presenting, I have had the privilege of verifying invariably its practical efficiency by its successful employment in my own hands. In no case have I ever met with the slightest considerable hemorrhage or inflammatory reaction of any note. Each case seems fortunately to have pursued a steady and easy course to recovery, which unfortunately cannot truthfully be said of any other method as yet familiar to me, and my methods seem always to have been regarded by others as characterized by all due conservative precaution. The technic and advantages of this method, presumably original with him, were admirably set forth by Dr. Sluder in an address before the Otolaryngological Section of the St. Louis Medical Society at its regular meeting on Wednesday, Dec. 28, 1910. As the doctor himself has kindly consented to be present

at the reading of this paper, courtesy admits of the writer's leaving the more elaborate presentation of the details of his method to its respected author.

It seems hardly necessary to premise, before outlining briefly the technic of this method, but for the sake of security it may perhaps be as well to say of this, as of all operations generally, that it is admissible when locally indicated only when first the case otherwise has been proved to be a justifiably operable one.

(To be continued)

#### NOTES, CHIEFLY THERAPEUTIC, ON VARIOUS DISEASES OF THE SKIN

W. A. HARDAWAY, M.D.  
ST. LOUIS

Every one who has been in practice for a few years accumulates a good bit of odds and ends of experiences which, while of much, and often of very great practical, importance, can scarcely be embodied in the formal pages of a journal or, indeed, rarely find a place in the text-books.

In this series of short notes I intend to present briefly some of the observations and practical experiences, mainly therapeutic, that seem to be at least worth preserving, and which the editor of this journal has kindly consented to accept for publication. Some few of these notes have been published before, but mainly in books or journals now out of print.

##### SCABIES

During the Civil War and for some time afterward scabies was common enough; but from about 1870 until the end of the world's fairs and the Spanish War, it had largely disappeared, except at sea-port towns. The disorder is at present, however, fairly wide-spread over the whole country.

The usual way of treating scabies is by rubbing in sulphur ointment plain or in combination with some other drugs. There are slow methods and quick methods, but in private practice, at least, it is better to go slowly and be sure of a satisfactory result.

There is very little trouble in killing the itch mite with sulphur or other parasitocides, but it is sometimes rather difficult to cure the patient's skin after he has been cured of the scabies. In other words, the treatment is generally by far too drastic, and results in a severe dermatitis with, perhaps, great suffering, and from which the patient may be weeks in recovering.

In the text-books it is recommended that in the cases of quite young children sulphur in the strength of 10 to 20 gr. to the ounce of excipient is quite sufficient. Now, it is to be presumed that the itch mite is just as big when on the skin of a

child as on the skin of a grown person, and if 10 gr. of sulphur will kill the acarus in the one case it will be equally lethal in the other; therefore the massive doses for the adult are not at all necessary.

The point, of course, is that both in child and adult we should endeavor to get rid of the parasite with as little detriment to the host as possible.

In practice I have found the following plan of treatment generally satisfactory:

The patient is directed to take a hot bath at night with moderate frictions of green soap, preferably Bago's; on retiring he is to apply the following ointment, and to repeat it morning and evening for three days, that is, six rubbings altogether:

R Sulphur præcipitati . . . 5iii-vi  
Balsami peruviani . . . 5i  
Vaselini . . . . . 5iii

M. S.: Rub in one-half ounce night and morning. The druggist is ordered to furnish the patient a half-ounce box as a measure.

The salve should be well worked into the skin, particularly in those parts where the eruption is most profuse. The face should be carefully avoided; in fact the hands should be washed after these manipulations to avoid any contact of the sulphur with the face or eyes. It is best that the patient should put on fresh underclothes and lie between clean sheets before beginning the treatment, but he should make no change until the course is over.

If the treatment has been begun at night, the sixth, or final, rub will occur in the morning; at bedtime a second hot bath, with green soap frictions is taken, the patient gets into clean clothes, and his bed linen is renewed. For perhaps a week longer a small amount of the same salve may be rubbed in at night at itching points. If the pruritis is more general—a sort of habit-pruritus—a zinc lotion with a small amount of carbolic acid may be prescribed. It is absolutely essential that the underclothing and sheets be boiled, else reinfection is more than probable. The outer garments may be ironed with a hot iron.

The strong irritants usually prescribed containing heavy doses of sulphur, besides tar, green soap and chalk, often leave the skin greatly inflamed; but this unfortunate condition of affairs is not prone to occur when the mild and equally efficacious treatment outlined above is adopted. It must be confessed, however, that in nervous people a certain amount of pruritus remains for weeks, and is exceedingly obstinate. Sometimes this secondary affection with its accompanying eruption, is somewhat suggestive of dermatitis herpetiformis.

Nervines, such as the elixir of the valerianate of ammonium, and lotions containing menthol



and carbolic acid, are the best means of combating this condition, coupled with the assurance that the parasites themselves have been destroyed. It is rarely necessary to direct a second cycle of the sulphur inunctions.

If there are several members of a family similarly affected, it is obvious that all of them should undergo treatment simultaneously, else reinfections are likely to occur.

There is one very practical point which I have kept to the last, and it is this: If the ointment is not properly prepared, that is, absolutely free from all grittiness, it will do more harm than good, and this is true of any kind of salve that may be ordered, but particularly true of salves containing sulphur. The physician should, himself, see to this important matter.

#### SYCOISIS VULGARIS, AND IMPETIGO CONTAGIOSA OF THE BEARDED REGION

Sycosis vulgaris, or folliculitis barbæ, is an extremely obstinate disorder, and in spite of the x-ray and vaccinothrapy and the older local applications, many cases resist all of our efforts to bring about even temporary amelioration.

So soon as the acute symptoms have subsided, all authorities agree that shaving daily, or at least every second day, is a *sine qua non* of successful treatment. I am quite persuaded of the importance of this procedure; but, curiously enough, I find no reference in the books to the necessity of doing this tonsorial operation aseptically. I shall return to this subject again when writing of other coccogenous affections, but I believe in treating sycosis it is necessary that the ordinary shaving brush and soap be discarded, that a cream rubbed in by the fingers should be used instead, and that the razor, etc., should be thoroughly sterilized. If these precautions are not observed, reinfection is bound to occur, and our best efforts are wasted.

In sycosis of the upper lip it is of course necessary to treat any nasal discharge by appropriate applications.

In subacute or chronic types of sycosis I have found what is known as Rosenthal's paste to give very good results. The original formula called for an extremely stiff paste that is very difficult to use, and I have modified it considerably in the following prescription:

R Acidi tannici ..... gr.lxxv  
Sulphuris præcipitati ... ʒiiss  
Zinci oxidi .....  
Pulv. amyli.....āā ʒiii  
Vaselini ..... ʒiiss

M. S.: Apply twice a day.

It may also be mentioned in the interest of asepticism that the paste should not be taken out by the patient's finger, but removed by a bit of

stick or tooth-pick, and then applied to the face with the finger, and smeared on in a thin layer without rubbing.

Sometimes this paste, even modified in this way, is too thick, and should be softened with a little oil of sweet almonds.

Impetigo contagiosa was at one time almost entirely confined to children, but it is now seen far more frequently among adult males, who get it from the barber shop where it has found an apparently permanent lodging place.

In the interest of the public health the patient should not be allowed to return to the barber shop, but should shave himself, using the same precautions mentioned above.

I have often seen the disease kept up for long periods by neglect of these precautions.

Almost any weak parasiticide is effective, but it is well to remember that the crusts of the lesions should first be removed, and the salve thoroughly applied.

#### CARBUNCLE

I have elsewhere expressed<sup>1</sup> my belief that in a considerable number of instances carbuncles find their origin in the barber shop. Later and more extended experience has confirmed me in that conviction. I have seen many cases of carbuncle in which the evidence seemed to me conclusive.

When we recall the intimate contact of the barber with his subject, and the usually utter neglect by the former of surgical cleanliness, it is not difficult to understand that there exist many opportunities for infection.

Moreover, it is a noteworthy fact that women, who do not frequent barber shops, rarely suffer from carbuncles (their immunity is generally commented on in text-books) although, of course, they are not altogether immune. In the majority of cases in men the carbuncles occur mostly on those parts of the body most exposed to infection, e. g., the nape of the neck and not so infrequently the bearded face.

Since carbuncles are by no means trivial affections, especially in weakly persons and diabetics, the possibility of their transmission by the barber should be remembered and the necessary precautions observed.

It is equally true that chronic furunculosis of the back of the neck is due, in many cases, to the barber's fingers and the utensils of his trade.

To secure a certain degree of safety from these troubles, not to mention impetigo contagiosa, ringworm, etc., one should provide his own equipment (clippers, shears, brush and comb, and hair duster), or he should at least insist that the barber must wipe his clipper and shears with alcohol, and wash his hands before beginning

1. St. Louis Courier of Medicine, December, 1903.

operations. As to shaving, it may be said that everyone should be his own barber.

### URTICARIA

Acute attacks of urticaria are usually due to some irritating food, or some food for which the patient has an idiosyncrasy, and should be treated by giving an emetic and later an aperient. When sour fruit is the cause of the outbreak Whitfield gives at once 30 grains of calcium lactate in 2 ounces of anise water.

Chronic urticaria will tax the skill and patience of the physician to the extreme, but the details cannot be gone into here. I wish, however, in this place to call attention to the value of a method of management which I have found of great service in those cases of acute urticaria that are kept up by repeated exacerbations, last for several days, and induce the most exquisite local and general suffering.

The internal treatment consists in the administration of 5 or 10 grains each of a powder containing subcarbonate of bismuth and carbonate of magnesium every three or four hours, coupled with the liberal drinking of Vichy water, which should be fortified with a pinch of sodium bicarbonate on each occasion that the Vichy is drunk. I think it is necessary to insist on the subcarbonate of bismuth as the preparation to be used and not the subnitrate. The former is distinctly more calnative.

The local application of menthol, carbolic acid, tar, etc., give at least temporary relief. When carbolic acid, or the tincture of mineral tar is used, it acts best when sprayed on with an atomizer.

R Phenolis (vel tinct. picis mineralis) 5ii  
Glycerini ..... 5ss  
Aque, q. s. .... ad 5xvi  
M. S.: Mop on with a rag or use as a spray.

A prescription containing menthol, and carbolic acid added to zinc lotion (non-sprayable) is appended:

R Mentholis ..... 5i-ii  
Alcoholis ..... q. s.  
Phenolis ..... m.xx-xl  
Zinci oxidi ..... 5iv  
Pulv. calaminæ præp.... 5iv  
Glycerini ..... 5ii  
Liq. calcis ..... 5ii  
Aque, q. s. .... ad 5viii

M. S.: Mop on with rag.

McIntosh's cream is sometimes better borne than any form of lotion.

R Bismuthi subnitratis..... 5ii  
Zinci oxidi ..... 5ss  
Glycerini ..... 5iss  
Phenolis ..... m.xx-xxx  
Vasellini ..... 5vi

M. S.: Apply with finger or brush.

### DERMATITIS DUE TO "WALNUT JUICE" HAIR DYES

I must again beg leave to renew attention to a subject that I have referred to in another place.<sup>2</sup>

I am the more inclined to do this because I find that both the profession and the laity seem to be unaware of the ill effects of the so-called walnut hair dyes.

Recently Dr. Chipman of San Francisco published an interesting paper<sup>3</sup> on "Dermatitis Venenata from Proprietary Hair Dye," in which he reports a number of cases of dermatitis following the use of a certain "walnut tint" hair stain. It seems, however, that the action of this particular dye is due to paraphenylene diamine oxidized by means of a solution of hydrogen dioxide. Mewborn<sup>4</sup> had also called attention some years before to a similar preparation, and its deleterious effects are well known in France.

There are a number of "walnut-juice" preparations on the market, but whether they are all similar chemically to the one mentioned above, or whether any of them contains walnut juice, I cannot at present say. This, however, I do know, that the very first case that I recognized in practice was the result of the application of a decoction of walnut hulls prepared at home.

Referring to this and other cases I said in my original paper that "the symptoms produced have been the same from both sources, so it is possible that the commercial dye really contains walnut juice." The real point at issue is, however, that certain hair dyes purporting to be made from walnut juice are really very mischievous in their action, whether containing walnut juice or not.

I am constantly seeing cases of more or less pronounced inflammation about the face and head, which come to me usually with the diagnosis of eczema, and the history of long treatment both internal and local, where the real nature of the affection could have been divined by a little judicious investigation. The scalp itself is very rarely involved in the inflammation, the stress of the disease falling on the skin of the forehead, ears, face and neck, sometimes in one region alone, or in several; and also in varying degrees of severity. I must, however, refer the interested reader to the original article for the details of the symptoms present in these cases. The patient is directed to wash out the dye very thoroughly from the hair, and then to apply soothing pastes, salves or lotions, as may be required, to the affected parts.

2. Inter-State Med. Jour., August, 1908.

3. California State Jour. of Med., August, 1911.

4. Jour. Am. Med. Assn., May 18, 1901.

Do Not Fail to Attend the Fifty-Fifth  
Annual Meeting, Sedalia, May 21-23, 1912.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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MAY, 1912

### EDITORIALS

## FIFTY-FIFTH ANNUAL MEETING

## State Medical Association

**SEDALIA**  
**MAY 21, 22 and 23**

## PROGRAM

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## GOING?

**Reduced fare returning if you  
bring "Certificate."**

**Ask ticket agent for "Certificate"  
and deposit with secretary.**

## THE ANNUAL MEETING, SEDALIA, MAY 21-23

There is unusual interest among the members throughout the state in the coming annual session of the Association at Sedalia, May 21-23, and indications point to an attendance larger than that of any previous meeting. The program is published in this issue and we believe all will agree that it is one which will hold much interest for every member of the Society.

The meeting of the House of Delegates will be especially interesting and important. One of the subjects that will call for earnest and careful consideration is the establishment of a larger defense fund for the defense of our members against suits for malpractice.

The Secretaries Association will meet at 4 p. m. on Tuesday and should attract a large number of the county society secretaries for the discussion of questions that are of importance to these officials in maintaining a lively interest in county society organization. County secretaries' dinner at 6 p. m.

The arrangements for the meeting are very convenient as the sessions will be held in the court house in rooms that adjoin each other. The public meetings will be held in the Sedalia opera house. A novel feature of the public meeting on Wednesday night, May 22, will be some moving pictures telling the story of disease transmission in various ways.

The alumni dinners will be held on Wednesday evening between 6 and 8. On the same night between 10 and 12, following the public meeting, the Sedalia physicians will entertain the members at a smoker.

Don't forget to ask the ticket agent for a "certificate" when purchasing ticket to Sedalia for the annual meeting, May 21-23.

## THE HEALTH CERTIFICATE AND THE RIGHT TO MARRY

The organized medical profession of the country has long advocated reforms in many of the practices which an unthinking people have permitted to grow into fixed customs in spite of the knowledge that such customs are detrimental to the health of the community and cursed with a blight that mars the mental and physical perfection of coming generations. One of the most important of these reforms is that of putting a check on the promiscuous marriage of persons who are unfit to assume the responsibilities of parenthood.

A few states have realized the great good that will grow out of proper restriction of the marriage contract and now require certificates of health in both parties before issuing licenses to marry; but the most promising impetus given to

this question was the recent announcement of a Chicago clergyman that he would in future wed no couple who did not present certificates of health from reputable physicians.

The stand thus taken is most commendable. There is great need of some such deterrent to the marriage of persons unfitted by reason of mental and physical imperfections which are transmissible to their progeny. If this requirement becomes a general custom among those authorized to legalize marriage it will pave the way for statutory requirements that will insure to generations yet unborn a right of heritage that is utterly unobtainable otherwise. After that there will be few cases of congenital idiocy, blindness and deformity, for most of them can be absolutely prevented by a precaution of the kind here advocated, and untold suffering will be avoided, to say nothing of the monetary expense spared to society and the state.

The pulpit and the press should sanction and urge a rule of this sort; no measure or custom can be established whose enforcement will operate more radically for the promotion of the health and happiness of the future of the nation. Nor will it fail to exert a most needed effect on the present generation in causing the people to have greater care of themselves.

### CONSERVATION OF CHILD LIFE

Congress is gradually coming to realize that its duty to the people includes an oversight of the health and living conditions of the human family. The hogs and the cattle, the fish and the birds, the plants and the trees, the soil and the rivers, all are safeguarded from wanton destruction by rapacious marauders; but the sanctity of "personal rights" has so enthralled the nation that human health and life have been regarded as little more than a commercial asset, and those who trafficked in their waste not only have not been "regulated" but have actually been protected by law-making and law-interpreting bodies, as well as by the press.

The passage of the Borah child bill and its approval by the President indicates that a change has taken place in the popular mind as to what constitutes "personal rights," for with the approval of this bill child-life has become recognized as a proper governmental study. The bill creates a new bureau whose province will be the collection of statistics of all sorts concerning the living and labor conditions of children.

The bill was opposed bitterly by some members of the House and Senate on behalf of certain industries employing large numbers of young children, but despite this opposition the measure obtained a safe majority in both chambers by reason of its high importance as a public welfare measure. The reports of the investigations pur-

sued by the bureau will be published by the government from time to time.

The establishment of a bureau of this kind is a long step in the direction of health conservation and should have been created long ago. The next step—which should have been the first step in the scheme of health and life protection—is the passage of the Owen bill and the establishment of a department of health for the protection and conservation of all human life and health.

### THE COUNCIL ON PHARMACY AND CHEMISTRY IS REASONABLE

One of the criticisms made by those who are opposed to the Council on Pharmacy and Chemistry, i. e., the manufacturers of proprietaries and the journals which depend on them for support, is that the Council is impractical and unreasonable. Being composed of scientists and college professors it is argued that the Council neither understands the reforms demanded by the practitioner nor those which commercial conditions make feasible. Or, to put it bluntly, it is suggested that the Council may mean well but that it does not know how and that its decisions should not be taken seriously because they are not practical. As a matter of fact, a consideration of the past reports of the Council as well as of its personnel plainly shows that the Council is quite familiar with what the medical profession needs and wants and what trade conditions will permit.

That the Council understands the needs of the profession and that it is not unreasonable or arbitrary in its demands is well shown by an address to manufacturers which the Council has just issued. In this address (*The Journal A. M. A.*, March 30, 1912, p. 953), which asks that manufacturers adopt more satisfactory names for their medicinal products, it is pointed out that it is quite possible to adopt names for medicines which shall tell their composition: and further that the interests of the manufacturer can be safeguarded by appending to such names the initials of the firm or other designation, which latter plan has permitted the building up of world-wide reputations for such products as chloral hydrate, Schering; chloroform, Squibb; phenacetin, Bayer, etc. Next it is pointed out that if firms insist on the use of names which can be held as their exclusive property, it is still possible to select those which shall at least indicate the important constituents in the remedy as is done in bornyval, guaiacodein, tannismuth, etc. The address makes clear the objectionableness of therapeutically suggestive names, namely, that it fosters harmful and dangerous self-medication by the public and that it tends to the unritical use of such suggestive titles by physicians. Recognizing the difficulty of replacing established names, it announces that no objection will be



made to therapeutically suggestive names that are already in use unless they are plainly an appeal to the public, and requests only that in the future such objectionable names shall be avoided. Can the manufacturers ask for more fair treatment than this? We think not.

### THE HOUSE OF SQUIBB EXONERATED

Last month we discussed an analysis made in the A. M. A. chemical laboratory of Thoremadin (Squibb) and the report on it by W. A. Pusey showing that this "cancer paste" did not owe its activity to radio-active thorium, as suggested by the rather vague statement in the "literature," but instead to the discredited cauterant, sulphuric acid. Regarding its manufacturer we noted that it was being put out by a firm whose reputation for honesty and conservatism had been unimpeachable, and in conclusion we said: "That the firm of E. R. Squibb and Sons, who presumably have competent chemists in their employ, should jeopardize their fair name by undertaking the exploitation of this "paste" is beyond our comprehension."

We are now able to say that the firm has given a satisfactory explanation of its connection with Thoremadin and that it apparently is entitled to the continued confidence of the medical profession. The firm explains (*The Journal A. M. A.*, April 13, 1912, p. 1135), that the formula of Thoremadin was withheld only because the preparation was believed to be in the experimental stage and that it engaged in its manufacture only after the claims for it, as a thorium preparation, had been confirmed by medical opinion which was deemed trustworthy. As a proof that any wrong action was one of judgment and not one of intent the firm has submitted Thoremadin to the Council on Pharmacy and Chemistry for investigation with the agreement to abide by the Council's decision. This evidence that the firm wants to deal fairly with the medical profession entitles it to the continued confidence which the house of Squibb as no other firm has had in the past. Let us hope that other firms will profit by the example set by the successors of Dr. E. R. Squibb and that firms which want the confidence of the medical profession will show in an equally practical way that they are deserving.

### A REDUCTIO AD ABSURDUM

Preventive medicine has loomed large within recent years and receives no little attention from time to time in current literature. That it has a large future the medical profession has long realized, and the lay mind is now opening to its possibilities; but we see no reason for assuming that preventive medicine has not its limitations

even as other mundane things, though there be those who seem to believe the prevention of disease will reach such acme of perfection as will result in the eradication of disease from the face of the earth; after which as a fitting climax the medical profession will be ushered off the stage amid a grand fanfare of trumpets. When such a consummation actually transpires we shall rejoice in common with the rest of mankind in so happy an event; but until some reason warranting that expectation shows itself we do not believe in preaching its approach.

Some enthusiasts of preventive medicine now and again wax so perfervidly exuberant that they divest themselves of what judgment they may have possessed in saner moments and give deliverance to all manner of ill advised prognostications which serve no other purpose than to discredit the thing they so ardently espouse. Of this sort is an effusion<sup>1</sup> by A. L. Soresi, M.D., of New York. The burden of this contribution to contemporary literature—and the burden is not perceptibly lightened by being spread over eight and a quarter pages—is the overgrown desire on the part of its author to clean up the world and his proposal to do so by giving everybody a general medical education.

Dr. Soresi is of the opinion that universal prophylaxis against disease cannot be accomplished through antitoxin inoculation for he is quite sure that by the time we have established general immunity by this means we shall have also disposed of the hosts. But disease must be eradicated, he thinks, and so he continues to cast about till he finds the great solution.

We confess ourselves at a loss to know just how his reasoning may be reconciled to the situation, but it appears that in observing the two facts, the prevalence of ignorance on the part of the public as to medical matters, and the prevalence of disease, he posits the first as the cause and the second as the consequent. And the conclusion follows, as the night the day, if we dispel the ignorance the diseases will dispel themselves. This form of argument is not new; Cervantes was familiar with it.

The future here painted for us does not lack brilliance. The final climax is of course the eradication of disease but there are not wanting benefits to be derived en route. Dr. Soresi says: "When everyone had benefited by a general medical education he would be better able to appreciate the services of his physicians, would be able to help him (*sic*) in making his diagnosis and in administering the proper treatment, and would appreciate much more the good work his physician was doing."

Plethoric evidence shows that the only sort of medical knowledge possible to the average layman really interferes with the physician's work, ham-

1. General Medical Education: The Only Rational Preventive Medicine, *Med. Rec.*, Feb. 17, 1912, p. 303.

pers diagnosis, and makes the patient supersensitive, suspicious, and hypochondriac.

It is a matter of years of study — this thing of becoming sufficiently familiar with pathology to use it intelligently, and anything short of mastery of the fundamentals is dangerous and worse than useless. The attempt to give everybody a general knowledge of the pathologies would result in a perfect maelstrom of psychasthenias.

The theme of Dr. Soresi's argument is an attempt to prove, and he has done so to his own satisfaction at least, that without the cooperation of the public the medical profession can do nothing in the way of preventing disease: that with this cooperation all things are possible, and that before this essential cooperation can be realized it will be necessary to educate the layman up to the point where he will be able to diagnose his own ailments.

The cooperation of the public is really needed; but more essential in the beginning is the assistance of officials and authorities of cities, towns, and rural districts, in enforcing statutes and ordinances. In the steps taken to control yellow fever New Orleans and Havana were successfully renovated, not only without first imparting a general medical education to the citizens but in the face of opposition.

The best that we can do will not rid the world or a community of all disease. Medical science makes no such claim. Diseases are peculiar to certain stages of social development; they do not come or go in a single night but are the unconscious concomitants of generations of varving civilizations. The affections of frontier life are peculiar to that existence, just as certain other diseases are indigenous to the metropolis.

It is one thing to give the people plain hygienic truths, the observance of which will enable them often to avoid the incurrence of disease through thoughtless carelessness, and another thing to give the great public an education in medicine that will enable them to keep themselves unspotted from the world.

To the question that Dr. Soresi asks and fails to satisfy: "Is it impossible to eradicate disease, and is then preventive medicine only a dream?" we must make answer that in the light of what is known to-day the eradication of disease is beyond us, and it is not the part of sober judgment to maintain anything else.

There is reason to suppose that preventive medicine will do considerably more for the benefit of mankind than has yet been accomplished when the researches now being pursued have reached their fruition, but nothing is to be gained by being unsane about it.

### WAR ON MOSQUITOES

The St. Louis Health Commissioner recently pointed out the expediency of inaugurating a

campaign this spring against mosquitoes in that city. At least \$30,000 will be necessary to initiate the movement, and more assistants and inspectors than are available at present will be required.

The city fathers who hold the money bags are loath to pass the necessary appropriation, whether from ignorance or indifference we cannot tell. But in the light of the immediate relief from malarial affections that the eradication of mosquitoes brings it is hard to figure out just how the city fathers of St. Louis can sidestep a matter so important to the health of the community.

The aid of the Boy Scouts has been promised, which will materially reduce the expense of additional inspectors in connection with the routine work of sanitation in the fight against mosquitoes, and we hope the municipality can afford \$30,000 in so sensible a cause.

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## EDITORIAL NOTES

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Don't forget to ask the ticket agent for a "certificate" when purchasing ticket to Sedalia for the annual meeting, May 21-23.

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GREENE County Medical Society is considering the subject of establishing the custom of holding one open meeting each year "at which time a subject of public interest will be discussed by members of the society and citizens interested in the topic under discussion." Another resolution is also being considered which proposes that the society shall devote one evening in June each year to "social conversation, visiting and smoking." At this meeting each member may bring one friend. The society has also prepared a program for all its meetings during the year.

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"A NEW Conscience in Regard to an Ancient Evil" is the title of a new book by Jane Addams, founder of Hull House. The book deals with the social evil in a very practical manner as Miss Addams has had very extensive and intimate experience with the lives of women and girls of the under-world. Her description of the white slave traffic is very vivid. The practicality of her suggestions for correcting this evil is apparent but the light of publicity must be shed broad and clear. This Miss Addams has accomplished in an effective and convincing manner. The book is published by *The Survey*, 105 East Twenty-Second Street, New York.

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PLATTE County Medical Society will hold a meeting May 1 to which the public is to be invited. The program includes the following subjects of general interest: "What the Doctor is



Doing for the Laity," by Prof. J. J. Neff; "The Necessity of Vaccination," by Dr. R. P. C. Wilson; "Suggestions as to Prevention of Disease," by Dr. J. H. Sampson. The evening will be rendered further enjoyable by readings and musical selections.

This society has prepared programs for all its meetings during the year, neatly bound and distributed to the members. Several other societies have pursued this method and found it very successful in keeping up the interest of the members. The arrangement is worthy of imitation by other societies.

### CITY HOSPITAL PRACTITIONERS' CLINICS AT ST. LOUIS

The object is to utilize the material in the City Hospital for the profession at large by giving an opportunity to study cases both from the standpoint of the special interest and of advances in methods of diagnosis and treatment.

Clinics will be held from 10 to 3 every Saturday, from May 18 to July 1.

Program of the clinics will be arranged and announced by the committee in cooperation with the hospital commissioner and superintendent of the hospital.

Only those members of the staff on duty shall be entitled to conduct the clinics.

Any registered physician will be permitted to attend these clinics and senior students may attend by special invitation.

It is proposed that free clinics be held every Saturday morning between 9 and 12 from May 18 to July 1. The clinics to run simultaneously: one to be a medical clinic, neurologic or pediatric; one surgical and one special. If the clinics prove to be a success and the attendance shows sufficient interest, they will be resumed in the fall.

## CORRESPONDENCE

Don't forget to ask the ticket agent for a "certificate" when purchasing ticket to Sedalia for the annual meeting, May 21-23.

### FOR DEFENSE FUND

*To the Editor:*—I am with you body and soul as regards the committee's resolution recommending an increase of dues to augment the work of defense. Heretofore I have carried insurance with a defense company and I need not say it is considerably more expensive than your suggestion.

This matter I shall certainly bring to the attention of our county medical society and use all efforts possible to bring about all the aid needed.

JAMES H. MORROWAY,

President Harrison County Medical Society.

### ESTABLISH A DEFENSE FUND

NOVINGER, March 18, 1912.

*To the Editor:*—In regard to liability insurance, I wish to say I am in favor of making an effort to carry the Jackson County resolution at Sedalia. I think the compensation is small. Make the county society dues, state dues and dues for legal defense all total \$10 per member. If this cannot be done then establish the defense on a solid foundation by creating the committee as asked and leave it optional with each member to paying as a defense member or not as he chooses. Further, establish a sliding scale for paying damages; say after the defense has carried a case to the highest court and then found it has lost, pay 10 per cent. of the defense fund on hand. If judgment is \$500 and there is \$5,000 in the defense fund then the defendant will not lose in cash.

J. SCHOOLING GASHWILER,

Secretary Adair County Medical Society.

### MERIT SYSTEM FOR ELEEMOSYNARY INSTITUTIONS

St. Louis, April 19, 1912.

*To the Editor:*—At the next meeting of the State Association at Sedalia, May 20-23, it is hoped that a strong resolution may be adopted in favor of establishing a merit system in the selection of officers and employees in the state hospitals. It is a singular situation that in Missouri we continue to discharge servants whose training has made them efficient, as soon as even partly trained. No branch of the state's service stands so much in need of a merit system as its eleemosynary institutions for it requires longer and more careful training in them to secure the highest results. So long as the tenure is uncertain and short, so long will it be impossible to expect any substantial progress.

In states like Michigan an unwritten law has taken the place of a merit or civil service plan. But Missouri has no law, written or unwritten, which secures to us the benefits we should derive from experience, training and instruction received in this branch of the service.

We believe a commission should be appointed by the governor which would by examination and investigation create a body of eligible candidates for all the positions in the hospitals and no one should receive an appointment except from that list.

We believe that tenure should depend on efficiency instead of on the accidental shifting of the politics of the governor.

We believe the service should be graded and that remuneration should follow competency as it does in all other walks of life.

We believe in a central board of managers who shall be men of experience and probity to which

all matters pertaining to the hospitals should be referred.

We believe the superintendent should have at least five years' training in this special work and should be supreme in his hospital, his acts being subject to review by the central board.

We believe all the hospitals should stand as a unit and receive an appropriation to be apportioned by the central board which would be immediately cognizant of the special needs of each.

We believe it should be possible to promote officers for merit, in their own and to the other hospitals.

No business organization which constantly lost the benefits derived from its trained employees could continue to exist. What would happen if a new set of railroad men or factory men or salesmen were taken on every four years or even, as has happened in our state hospitals, every year? It sounds appalling.

Hospital work requires special training. Let us get good employees, train them to the highest point of efficiency and retain them in the service of the state during good behavior.

This is the gist of the merit system proposal. It only requires what every successful business man demands.

Very truly yours,

M. A. BLISS.

## SQUIBB & SONS EXPLAIN

NEW YORK, April 9, 1912.

*To the Editor:*—In pursuance of our recent advice to you, we wish to say that our reply to the criticisms regarding Thoremadin will be published in the next issue of *The Journal of the American Medical Association*, according to information we have just received, and we feel confident that the same will prove entirely satisfactory to you.

Now, as to the gentlemen responsible for those criticisms, we have every belief in their honesty and sincerity of purpose, and have never doubted that they were actuated by high motives. In their great zeal for reform, however, they were in this case simply carried beyond the lines of necessary effort; and in view of the vital importance of the good work they are doing and the great difficulties and dangers which beset the pathway of every reformer, we have no desire to find fault, but merely ask for the correction of the wrong which was done us.

We earnestly hope that all our friends will take the same view of the incident so that the cause may not suffer by ill-directed quarrels.

Faithfully yours,

E. R. SQUIBB & SONS,

THEODORE WEICKER, Vice-President.

[See comment on page 436.]

## MATAS OPERATION

*To the Editor:*—Some time last year I noticed in *THE JOURNAL* a request that any operation done by the method of Dr. R. Matas for relief of aneurysm be reported to him directly, or through *THE JOURNAL*. Accordingly I submit to you the following report of an operation, or rather two operations, done on the same patient last year:

A white man aged about 60 years had aneurysm in the left popliteal space, with the usual symptoms lasting over a space of time about two months, as I now remember. He came under the intelligent management of Drs. L. Bagy and C. S. Neer of Oklahoma, who, after rest in bed and elevation of the limb until collateral circulation could be fairly presumed upon, asked me to operate. In the home, with no other help than these gentlemen, one of whom administered ether, I opened the space down to the sac, passed as a precautionary untied ligatures above the tumor, opened the sac from end to end, wiped out the coagulum, and sewed up every opening with chromicized catgut. After this the walls of the aneurysm were coated by superimposed lines of stitching with the same material. Lastly the fascia and skin were closed with silkworm gut, and warm dry heat applied. Before the operation the leg and foot were swollen and tender; after operation they were blanched. All pain and tenderness disappeared almost immediately after operation. After 24 hours the pink hue began to reappear and artificial heat was gradually discontinued. Except for some superficial suppuration the recovery was uneventful, and he was out on both feet.

Now comes the unexpected. Two or three months later he presented the same condition in his other popliteal space. After the same preparation by the same physicians, again in his home, I undertook a second operation, but with not so fortunate an outcome. The upper boundary of the tumor was at the point of emergence from the adductor muscle, so that I could not place my precautionary ligature. So with tourniquet applied we proceeded, cleaned out clots as before but found a different pathology. The rupture had been from without inwards against the bone. The points of entrance and exit of the main arterial trunk could not be readily found. The whole condition was apparently unfavorable for further effort to close the sac. Also fearing an infection by reason of the environments I judged it safer to amputate.

I should have liked very much to have recorded to the credit of Dr. Matas a consecutive success on the same man, but I remembered that "pride goeth before a fall" and desisted. The man slowly recovered and is now on an artificial limb.

[NOTE.—The author of this report neglected to send his name and address. We hope he will supply this information, to complete the record.—ED.]

## NEWS NOTES

Don't forget to ask the ticket agent for a "certificate" when purchasing ticket to Sedalia for the annual meeting, May 21-23.

DR. CLAUDE E. LOWERY of Lancaster, Schuyler County, has bought out Dr. J. C. Nunn of Novinger, and is in possession.



DR. ROSS WOOLSEY, assistant to the chief surgeon of the Frisco Railroad at St. Louis, was married to Miss Mary Ricard Beck of St. Louis, April 17.

THE Laclede County Medical Society held its regular session at Lebanon, April 8. We hope to have a report of the meeting in time for our next issue.

DR. D. E. SCHMALLHORST of St. Louis, while visiting a patient in St. Louis County recently, had the misfortune to lose his automobile. It took fire and was a total loss.

DR. ANDREW W. MOORE of Fayette celebrated his sixty-sixth birthday, April 16, and entertained members of the Howard County Medical Society at a smoker-dinner in honor of the occasion.

BATES County Medical Society held its regular meeting at Butler, March 28. The subject for discussion was "Cerebrospinal Meningitis: Its Causes and Means of Prevention and Treatment."

THE Russell Sage Foundation has established an agency for its publications at St. Louis with the Jett Book and Stationery Company of that city. Lists of the publications can be obtained from this company.

DR. M. E. DERFER of Novinger is confined to his bed with a septic infection of his left thumb. A glass, into which he was pouring hot water, broke and he received a small cut from a fragment, but the wound became infected.

THE American Proctologic Society will hold its fourteenth annual session at Atlantic City June 3 and 4. Information concerning the program will be furnished by the secretary, Dr. Lewis H. Adler, 1610 Arch Street, Philadelphia.

THE American Academy of Medicine "specializing in medical sociology," will meet in Atlantic City May 31, June 1 and 2. Among the subjects to be discussed are: "The Relation of Women to Modern Industrialism"; "Teaching Preventive Medicine in Universities"; "Teaching Hygiene in Public Schools"; "Delinquent Girls as a Medical Study"; "The Relation of the Medical Profession to the Teaching Profession."

THE State Board of Health has revoked the license of Samuel D. Neveling of St. Louis for a period of three years, on the charge of protecting a fraudulent medical institution with his certifi-

cate. The board also revoked the license of James Lovell Newell and William Witter Turver for a period of six months. The latter were charged with offering to produce abortions.

THE St. Louis University Alumni banquet will be held at Sedalia, May 23, at 6 o'clock, the second day of the meeting of the Missouri State Medical Association. Graduates of the Beaumont Hospital Medical College, Marion-Sims College of Medicine, Marion-Sims-Beaumont College of Medicine and Medical Department of St. Louis University are earnestly requested to be in attendance. Tickets for the banquet can be obtained from Dr. E. P. Lyon, Dean, Medical School St. Louis University, or Dr. C. M. Nicholson, Chairman Banquet Committee. Price per plate \$2.

PROF. DR. JULIUS LEOPOLD PAGEL, the great historian and lexicographer, died at his home in Berlin, Germany, January 31, after an illness of but eight days. Dr. Pagel was born May 29, 1851, and was professor of medical history at the Frederick William University, of Berlin. By his writing, teaching, criticism and work in the field of original research, he has added a great amount of knowledge to the special branch that he loved so dearly. A number of large works as well as many short articles and monographs have come from the pen of this master. Professor Pagel was an honorary member of the St. Louis Medical History Club.

SINCE March 1 the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Capsules of Holadin Succinate of Soda and Bile Salts (Fairchild Bros. & Foster).

Capsules of Bile Salts, Succinate of Soda and Phenolphthalein (Fairchild Bros. & Foster).

Capsules of Holadin, Bile Salts and Phenolphthalein (Fairchild Bros. & Foster).

Euscol (Riedel & Co.).

Eucodin (Riedel & Co.).

Iodo-Casein (H. K. Mulford Co.).

Iodo-Casein Tablets 2½ grains (H. K. Mulford Co.).

Iodo-Casein Tablets 5 grains (H. K. Mulford Co.).

Formicin (Kalle & Co.).

THE fee-splitting practice was condemned by the St. Louis Medical Society at its meeting of April 6, and the following resolution adopted:

WHEREAS, Section 4, of Article 6, of the Principles of Ethics declares that "It is derogatory to professional character for physicians to pay or offer to pay commissions to any person whatsoever who may recommend to them patients requir-

ing general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or to receive such commission"; therefore, be it

*Resolved,*

1. That the secret division of the fee is a form of giving and receiving commissions;

2. That any member who is hereafter guilty of these practices shall be subject to expulsion;

3. That our delegates be instructed to present this matter to the House of Delegates of the Missouri State Medical Association at its next annual meeting, to be held in Sedalia, May 21-23, 1912.

The society also voiced the sentiment of the profession concerning the status of medical expert testimony and adopted recommendations submitted by the Committee on Public Policy and Legislation, as follows:

WHEREAS, Medical expert testimony is necessary and helpful to justice and ought to be effectively and freely used in the courts; and,

WHEREAS, The methods of legal procedure in trials involving medical expert testimony are now inefficient, and fail to utilize effectively expert knowledge and skill;

THEREFORE, In order to promote an improvement in these conditions, the Committee on Public Health and Legislation asks the adoption of the following recommendations by the St. Louis Medical Society:

First — As regards the legal side of the medical expert question, we recommend:

1. That a freer use be made of appointments of commissions and of experts by the court.

2. That the medical expert should be paid by or through the court, and not by the party in whose behalf he testifies.

3. That a period of hospital or similar form of observation of persons the nature of whose troubles is under dispute be adopted as being the best method for securing impartial and accurate opinions; and we recommend the enactment, in every state, of laws favoring such method.

Second — As regards the medical side of the question we recommend:

1. That it be adopted as the opinion of the Society that it is inadvisable and objectionable for any physician to occupy the position of medical advisory counsel in open court and at the same time to act as expert witness in a medico-legal case.

2. That it be adopted as the opinion of the Society that the acceptance by a physician of a fee that is contingent on the result of a medico-legal case is not in accord with sound medical ethics, is derogatory to the good repute of the profession and is injurious to the efficacy of expert testimony.

3. That the Society adopt the following as a definite minimum standard of qualification for medical men giving expert testimony:

"That a physician should not be considered a medical, surgical or special expert of the first class unless he is a graduate of a reputable medical college; has paid special attention for at least six years to the particular branch as to which he claims to be expert; has had opportunities of laboratory or clinical study, or both, in that branch for at least four years, and is a member of a general (and of a special) medical society in good standing."

4. That the Society recommend that other medical organizations adopt this or a similar minimum standard.

## DEATHS

DR. JOHN M. RICE of Warrensburg, formerly a member of Jackson County Medical Society at Kansas City, died at his home in Warrensburg, March 29.

DR. NORMAN F. TERRY of Springfield died very suddenly from a heart attack while in his office, April 17. Dr. Terry was a very active practitioner in Springfield for more than eighteen years. He was an active member of Greene County Medical Society, the State Association and the American Medical Association. He graduated from the Miami Medical College in 1876.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.

### RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

FORMICIN is formaldehyd-acetamid,  $\text{CH}_3\text{C.O.NH.CH}_2\text{OH}$ , a molecular compound of formaldehyd and acetamid. It is a thick, syrupy, water-soluble liquid, having a faint formaldehyd-like odor and a slightly acid, bitter taste. Solutions of formicin liberate formaldehyd gradually at body temperature, and thus exert an antiseptic action. Formacin solutions are employed as injections into tuberculous and non-tuber-



culous joints, tissues and abscesses. Kalle & Co., New York (*Jour. A. M. A.*, April 6, 1912, p. 1014).

**iodo CASEIN** is a compound of iodine with milk casein, containing about 18 per cent. of iodine in organic combination. It is a powder, almost odorless and tasteless and insoluble in water. It is said to undergo practically no change in the stomach, but to be quickly digested and absorbed in the form of soluble iodids, in the intestines. Dose, 0.3 to 1.3 gm. (5 to 20 grains). Iodo-Casein is also marketed in the form of tablets each containing 0.15 gm. ( $2\frac{1}{2}$  grains) and 0.3 gm. (5 grains) iodo-casein. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, April 6, 1912, p. 1014).

**MENINGO-BACTERIN** is a meningococcus vaccine believed to be useful in immunizing against the meningococcus of Weichselbaum. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, April 13, 1912, p. 1114).

**PHARMCEUTICAL PREPARATIONS OF ACCEPTED ARTICLES.** L-Suprarenin Synthetic Bitartrate Tablets, 0.001 gm., each containing l-suprarenin synthetic bitartrate equivalent to 0.001 gm. (1-65 grain) l-suprarenin synthetic (*Jour. A. M. A.*, April 13, 1912, p. 1114).

**COLON VACCINE** is a *Bacillus coli* vaccine marketed in bulbs ready for use. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

**GOONORRHEAL VACCINE (COMBINED)** is a gonococcus vaccine containing *Micrococcus gonorrhoe* and *Staphylococcus albus, aureus* and *citricus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

**TYPHOID VACCINE (PROPHYLACTIC)** is a typhoid vaccine containing *Bacillus typhosus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

**FURUNCULOSIS VACCINE** is a staphylococcus vaccine containing *Staphylococcus pyogenes aureus* bacteria. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

**ACNE VACCINE** is a vaccine prepared from acne bacilli. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, (p. 1195).

**COMBINED BACTERIAL VACCINE** is a vaccine containing bacteria of mixed *Streptococcus pyogenes*, *Staphylococcus pyogenes aureus*, *Staphylococcus pyogenes albus*, *Staphylococcus pyogenes citreus*, *Bacillus coli communis* and *Diplococcus pneumoniae*. Parke, Davis & Co. (*Jour. A. M. A.*, April 20, 1912, p. 1195).

## REFORM IN MEDICINES

**NATURE'S CREATION.**—A peep behind the scenes as regards the exploitation of patent medicines is given through the falling-out of the exploiters of Nature's Creation. This nostrum was first sold to the public as a cure for syphilis but later became a "consumption cure." The chief promoters, Mrs. J. M. Reynolds and Mr. H. W. Campbell, have had a falling-out and Campbell has taken the matter into court. The sordid details now brought out, it is hoped, will demonstrate to the public the fraudulent nature of the stuff (*Jour. A. M. A.*, March 30, 1912, p. 953).

**OBJECTIONABLE PROPRIETARY NAMES.**—In an address to manufacturers the Council on Pharmacy and Chemistry shows that it is possible to provide medicines with names descriptive of their composition and that the interests of both the manufacturer and the consumer, the physician and his patient, can be sufficiently safeguarded if to the descriptive name of an article there be appended a distinctive word, syllable, initial or sign that shall identify its manufacturer. The feasibility of coining proprietary names that shall indicate the important constituents of a remedy is shown by illustrations taken from "N. N. R." The objectionableness of names which suggest the use of a remedy to the

public is discussed and it is also pointed out that names suggestive to physicians are objectionable because there is a tendency that physicians will base their use of the remedy on the name without giving due consideration to the condition and symptoms of the patient. Since therapeutically suggestive titles have been applied to proprietary medicines without any intention of appealing to the public and since it is difficult to change a name once established the Council has decided to make no objection to such titles if they are already in use provided they are not liable to lead to the use of a remedy by the public (*Jour. A. M. A.*, March 30, 1912, p. 953).

**WINSLOW'S SOOTHING SYRUP.**—Being held injurious to life the sale and advertising of Mrs. Winslow's Soothing Syrup has been prohibited in New South Wales, Australia (*Jour. A. M. A.*, March 30, 1912, p. 954).

**DIASTASE PREPARATIONS UNSTABLE.**—A discussion at a meeting of the Société de Thérapeutique de Paris called attention to the instability of diastase, particularly in liquid preparations. Speakers emphasized the necessity of using only recently-made malt preparations in therapeutics if the enzym action be desired (*Jour. A. M. A.*, March 30, 1912, p. 954).

**A GOOD EXAMPLE.**—Having presented each member with a copy of "Nostrums and Quackery" the Los Angeles County Medical Society now presents a copy of "New and Nonofficial Remedies, 1912," to each member. It is suggested that with the possible exception of those physicians whose confidence in their own good judgment is equalled only by their child-like faith in the statements of proprietary manufacturers that a copy of the book ought to be in the hands of every physician who prescribes (*Jour. A. M. A.*, April 6, 1912, p. 1021).

**ZYMOTOID.**—Dr. Arnold's Zymotoid, a nostrum manufactured by Arnold's Zymotoid Company, Rockford, Ill., is a fraud of the Liquezone-Oxytonic-Septicide type. The A. M. A. Chemical Laboratory reports that the composition of Zymotoid was found to be: boric acid ( $H_2BO_3$ ) 0.637 gm., sulphur dioxide ( $SO_2$ ) 0.129 gm., sulphuric acid ( $H_2SO_4$ ) 0.048 gm., potassium nitrate, a trace, unidentified organic matter, a trace and water (by difference) to make 100 c.c. The analysis shows that but for the presence of boric acid the composition of Zymotoid is similar to other fraudulent "microbe killers" (*Jour. A. M. A.*, April 6, 1912, p. 1030).

**HAMLIN'S WIZARD OIL.**—From published formulas it appears that Hamlin's Wizard Oil is a variable mixture containing spirit of camphor, spirit of ammonia, chloroform, oil of sassafras, oil of cloves, oil of turpentine and alcohol. Liniments of this kind should be considered as belonging to the past (*Jour. A. M. A.*, April 6, 1912, p. 1033).

**NEWSPAPERS AND NOSTRUMS.**—It appears to be impossible to so censor "patent-medicine" advertisements in newspapers so that all objectionable matter is rejected and only the unobjectionable retained. This for the reason that there is no such thing as an unobjectionable "patent-medicine" advertisement in a newspaper. In proof of this it is pointed out that the *Chicago Tribune*, whose advertising and editorial ethics are of a high order, carries many advertisements which promote remedies or treatments condemned in its editorial pages. Thus, while its "How to Keep Well" department warrants that it is not wise for the obese to reduce their weight more than ten or twenty pounds a year, an advertisement in the same issue for Marjorie Hamilton's Obesity Cure claims that by its use fat may be made to vanish at the rate of one pound a day. A number of similar incongruities are discussed (*Jour. A. M. A.*, April 13, 1912, p. 1118).

**THOREMEDIN SUBMITTED TO THE COUNCIL.**—While acknowledging the correctness of the A. M. A. Chemical Laboratory analysis (*JOUR. MO. STATE MED. ASSN.*, April, 1912, p. 409), Squibb and Sons question the conclusions of Dr. Pusey that the product owes its virtues to sulphuric acid alone. The firm's claim that the product owed its virtues to the thorium which it contains was based on the reports of physicians in whom it had confidence. The product has been submitted to the Council on Pharmacy and Chemistry and the firm agrees to discontinue the sale of Thoremadin if the Council confirms Dr. Pusey's findings (*Jour. A. M. A.*, April 13, 1912, p. 1121 and p. 1135).

**"THERAPEUTIC EFFICIENCY."**—The defenders of proprietary frauds of the so-called ethical variety make much of the fact that the rejection of a product by the Council on Pharmacy and Chemistry is no proof that the product itself has no therapeutic value. In reply it is pointed out that a mixture of quinin sulphate and starch while therapeutically efficient may yet be exploited so as to make the mixture a rang humbug or a vicious fraud (*Jour. A. M. A.*, April 13, 1912, p. 1121).

**PRESCRIPTION FAKES.**—Oxzoine is a prescription fake advertised as a "wrinkle eradicator" and exploited by the To-Kalon Manufacturing Co., Syracuse, N. Y. According to the analysis of the state chemist of North Dakota it consists of zinc oxid 15.6 per cent., glycerin 16.7 per cent. and rose water 67.7 per cent. Saxolite is another "wrinkle eradicator," sold by the Dearborn Manufacturing Company, Chicago, and according to the analysis of the state chemist of Kansas consists of alum 52 per cent., and epsom salts 48 per cent. Vilane Powder is sold as a "concentrated powerful antiseptic germicide and disinfectant" by the Blackburn Products Co., Dayton, Ohio. According to the analysis it is a mixture of washing soda, cooking soda, common salt, sodium salicylate and a little thymol (*Jour. A. M. A.*, April 13, 1912, p. 1132).

**PROPHYLAXIS ENCOURAGED.**—The Council on Pharmacy and Chemistry desires to encourage the use of reliable and efficient antiseptics, germicides and disinfectants by the public, so far as is compatible with safety. Accordingly it indorses the advertising to the public of such preparations accepted for inclusion with New and Nonofficial Remedies, provided that the advertising is limited to recommendations for use as a prophylactic application to superficial cuts and abrasions of the skin and to the mucous surfaces except those of the eye and the gastro-intestinal and genito-urinary tracts (*Jour. A. M. A.*, April 13, 1912, p. 1132).

**VALUE OF INORGANIC PHOSPHATES.**—The wide-spread tendency to assume a better physiologic utilization of certain inorganic elements when they are furnished in the form of organic combinations is gradually being shown to be without warrant. Thus while it was supposed that the body need of phosphorus could not be supplied by inorganic phosphates, hens and ducks have been shown to be capable of living and of laying eggs when their food contained phosphorus only in the inorganic form. This makes it probable that the advantage of giving phosphorus in the form of lecithin or of glycerophosphates has been over-estimated (*Jour. A. M. A.*, April 20, 1912, p. 1198).

**CANDY IN PENNSYLVANIA.**—Good work is being done in Pennsylvania in the improvement of food products. A report of Charles H. LaWall shows that out of over 250 samples of cheap confectionery only four samples contained substances prohibited by law. Many specimens were found to be in a filthy condition and Professor LaWall recommends that manufacturers be compelled to wrap candies in paraffin paper (*Jour. A. M. A.*, April 20, 1912, p. 1202).

**SANATOGEN.**—According to advertisements, chiefly in the lay press, Sanatogen is "The Re-Creator of Lost Health," "a rebuilding food" and "revitalizes the over-worked nervous system," and has many other properties which should make it an "elixir of life." Examination in the A. M. A. Chemical Laboratory shows it to be casein with a little glycerophosphate and therefore not greatly superior to cottage cheese. The outrageous claims made for it are condemned by such men as Lewellys F. Barker, Frank Billings, Richard C. Cabot, Otto Folin, Ludvig Hektoen, J. H. Long, Graham Lusk and H. Gideon Well (*Jour. A. M. A.*, April 20, 1912, p. 1216).

**VALUE OF FERMENTED MILKS.**—P. G. Heinemann discusses the dietetic and therapeutic value of fermented milks prepared from commercial ferments. He concludes that sour milks as a part of, rather than an addition to, the diet probably are of value. If fermented milks are used then other food should be reduced on the basis of one pound of beef for every quart of milk consumed. There is much reason in the contention of Metchnikoff that premature senility can be prevented by regular diet, decrease of meat and regular consumption of Bulgarian sour milk, but it must not be thought that sour milk is a panacea and that by its use intestinal putrefaction will be reduced unless moderation in diet is practiced. The choice of a suitable ferment being of prime importance attention is called to those found efficient by the Council on Pharmacy and Chemistry and included in New and Nonofficial Remedies (*Jour. A. M. A.*, April 27, 1912, p. 1252).

**ECKMAN'S ALTERNATIVE.**—According to the analysis of the A. M. A. Chemical Laboratory Eckman's Alternative is a solution containing about 4 per cent. of calcium chlorid, 10 to 15 per cent. alcohol and a little powdered cloves. This mixture is sold at \$2.00 for 8 ounces under the cruelly false claim that it will save the tuberculous. The harm done by nostrums such as this lies in the abandonment of proper treatment by the patient and placing his dependence on the nostrum. Hoping against hope that in the "consumption cure" nostrum the secret has at last been wrested from nature by which the "White Plague" may be vanquished, the ever-optimistic consumptive sacrifices money which should go into good food, sacrifices all too precious time and, finally, life itself, and the consumption cure faker waxes rich in the toll of blood exacted from his credulous victims (*Jour. A. M. A.*, April 27, 1912, p. 1298).

**ANTI-DIABETICUM-BAUER.**—The methods of advertising Anti-diabeticum-Bauer have been shown up by the Society for the Suppression of Quackery. A suit by the proprietors of Anti-diabeticum against the editor of the *Gesundheitslehrer* resulted in the defeat of the proprietary concern (*Jour. A. M. A.*, April 27, 1912, p. 1298).

**PHENACETIN, SULPHONAL AND TRIONAL.**—It is a generally recognized principle that the name used by a patentee to designate a patented article becomes the common name of such article after the patent has expired. This principle and also the principle that a generic title—or common name—cannot be legally continued as a trademark have been generally recognized and are thoroughly well established by decisions of the courts. Accordingly the Council on Pharmacy and Chemistry has modified the descriptions for these articles in New and Nonofficial Remedies to indicate more clearly that the names "phenacetin," "sulphonal" and "trional" are synonyms for the official titles acetphenetidin, sulphonmethane and sulphonethylmethane, respectively, and that the tests of identity and purity prescribed in the U. S. Pharmacopeia should apply to the products under these titles (*Jour. A. M. A.*, April 27, 1912, p. 1298).



## SOCIETY PROCEEDINGS

### PROGRAM OF THE FIFTY-FIFTH ANNUAL MEETING OF THE MISSOURI STATE MEDICAL ASSOCIATION

Sedalia, May 21, 22 and 23, 1912

#### MEDICAL SECTION

FIRST DAY—TUESDAY, MAY 21, 1912

*Afternoon Session—1:30 o'clock*

##### COURT HOUSE

1. Vaccination Treatment of Skin Diseases.  
Halsey M. Lyle, Kansas City
2. Erythema Nodosum. M. H. Moore, Dearborn
3. Auto-intoxication. J. M. Bell, St. Joseph
4. Astasia Abasia. J. D. Brummall, Salisbury
5. Training of Physicians for Service in State Hospitals for the Insane.  
H. Unterberg, St. Louis
6. Training of Nurses for Service in State Hospitals for the Insane  
M. A. Bliss, St. Louis
7. Progress of National, State and Local Health Activities. F. B. Fuson, Springfield
8. Subject to be announced.  
C. M. Ketcham, Carthage
9. The Relative Position of Medicine in Modern Therapeutics. O. B. Hall, Warrensburg
10. Report of Committee on Trachoma.  
John Green, Jr., St. Louis
11. Habit as a Cause of Many Constitutional Diseases and How to Overcome It.  
C. Walker Watts, Fayette
12. Nitrogen Poisoning.  
J. J. Gaines, Excelsior Springs
13. Psychotherapy. Geo. W. Goins, Breckenridge

SECOND DAY—WEDNESDAY, MAY 22, 1912

*Afternoon Session—1:30 o'clock*

##### COURT HOUSE

1. Dietetic Treatment of Typhoid Fever.  
D. P. Dyer, Sedalia
2. Acidosis. Orville H. Brown, St. Louis
3. Empyema in Infancy.  
Jules M. Brady, St. Louis
4. Hemorrhagic Diathesis in Children.  
D. E. Broderick, Kansas City
5. Nephritis: Its Diagnosis and Treatment.  
William Engelbach, St. Louis
6. Social Aspects of Gonorrhea.  
Ferdinand Schreiman, Concordia
7. A Case of Double Chancre and Gonorrhea with Confrontation. Thomas M. Paul, St. Joseph
8. Serological Diagnosis of Syphilis and Gonorrhea: the Wassermann; the Gonorrheal Complement Fixation Test; the Weil Cobra Venom Test.  
R. B. H. Gradwohl, St. Louis
9. Treatment of Gonorrhea.  
John W. Marchildon, St. Louis
10. Clinical Methods; The Eye.  
P. I. Leonard, St. Joseph
11. The Dangers of Specialists.  
E. H. Miller, Liberty
12. The Heart Muscle. M. L. Sands, Warsaw
13. The Need of Further Development of the County Medical Societies. L. T. A. Mallette, Parma

14. A Plea on Behalf of the Unborn.  
T. F. Lockwood, Butler
15. Interesting Problems in Ear, Nose and Throat Practice.  
Robert Barelay, St. Louis

#### SURGICAL SECTION

FIRST DAY—TUESDAY, MAY 21, 1912

*Afternoon Session—1:30 o'clock*

##### COURT HOUSE

1. Symposium: Hypertrophy of the Prostate Gland.
  - a. History, Etiology, Pathology, Symptomatology.  
W. T. Elam, St. Joseph
  - b. Operative and Pathological Specimens of Hypertrophied Prostates: With Methods of Examination and Operation in Prostatic Obstruction; Illustrated with Lantern Slides.  
Bransford Lewis, St. Louis
  - c. The Present Status of Perineal and Suprapubic Prostatectomy. Jacob Block, Kansas City
2. Surgery of the Female Urethra.  
Fred J. Taussig, St. Louis
3. Popliteal Aneurysm. John I. Byrne, St. Joseph
4. Fractures of the Pelvis.  
W. T. Coughlin, St. Louis
5. Some Observations on Movable Kidney.  
H. C. Crowell, Kansas City
6. Fractures of the Larynx.  
W. E. Sauer, St. Louis

SECOND DAY—WEDNESDAY, MAY 22, 1912

*Afternoon Session—1:30 o'clock*

##### COURT HOUSE

1. Symposium: Surgery of the Stomach.
  - a. Carcinoma of the Stomach.  
J. F. Binnie, Kansas City
  - b. Gastrojejunostomy: Indications and Technic.  
Willard Bartlett, St. Louis
2. Further Observations Upon Membranous Pericolitis and Allied Conditions in the Ileocecal Region.  
Jabez N. Jackson, Kansas City
3. Intestinal Obstruction Resulting from Malignant Growths in the Jejunum; Report of a Case.  
F. W. Bailey, St. Louis
4. Intestinal Obstruction Due to Gall-Stone.  
John Young Brown, St. Louis
5. Decompression Operation for Hemiplegia.  
L. J. Dandurant, St. Joseph
6. Fixity of Lower Jaw: Report of Case.—Double Hare Lip with Operative Measures for Relief.  
F. Reder, St. Louis
7. Fractures in and About the Wrist Joint.  
W. A. McCandless, St. Louis

#### GENERAL SESSION

FIRST DAY—TUESDAY, MAY 21.—7:30 p. m.

SEDALIA OPERA HOUSE

1. Address of President.  
Robert H. Goodier, Stoutsville
2. Oration on Medicine. C. R. Woodson, St. Joseph
3. Oration on Surgery. C. M. Nicholson, St. Louis

SECOND DAY—WEDNESDAY, MAY 22, 1912

*Morning Session—9:00 o'clock*

##### COURT HOUSE

1. Chronic (Recurrent) Septic Endocarditis.  
L. H. Hempelmann, St. Louis

2. Abdominal Pain Differentially Considered.  
J. Q. Chambers, Kansas City
3. Status Lymphaticus; Report of a Case.  
Woodson Moss, Columbia
4. Insanity and Some of Its Manageable Causes.  
M. P. Overholser, Nevada.
5. The Clinical Symptoms of Hydrophobia; Report of Two Cases.  
Walter E. Harrall, St. Louis
6. Experimental Work on Anti-Rabic Immunization with Desiccated Virus.  
D. L. Harris, St. Louis
7. Medical Economics.  
A. H. Madry, Aurora
8. Report of Ten Cases of Duodenal Uleer.  
Chas. C. Conover, Kansas City
9. The Roentgen Ray Treatment of Post-Operative Sarcoma.  
W. L. Brosius, Gallatin
10. Thoracentesis as an Aid in the Diagnosis of Pleural and Pulmonary Diseases.  
W. P. Elmer, St. Louis
11. The Value of Beginning Passive Motion Very Early Following Fracture in or Near Joints.  
Carroll Smith and H. S. McKay, St. Louis
12. Physicians and Water-Supplies.  
O. W. H. Mitchell, Columbia

## SECOND DAY—WEDNESDAY, MAY 22, 1912

Evening Session—7:30 o'clock

SEDALIA OPERA HOUSE

1. Cancer: Illustrated with Lantern Slides.  
F. J. Lutz, St. Louis
  2. Vaccination: The Claims and the Facts: Illustrated with Lantern Slides.  
Joseph Grindon, St. Louis
- Motion Pictures depicting the causes of the spread of disease:
3. The Awakening of John Bond.
  4. The Man Who Learned.
  5. A Sane Fourth.
  6. The Fly Pest.

## THIRD DAY—THURSDAY, MAY 23, 1912

Morning Session—9:00 o'clock

COURT HOUSE

1. Election of President.
  2. Election of Orator on Medicine.
  3. Election of Orator on Surgery.
- If time permits the scientific work of the General Session will be continued.

## THIRD DAY—THURSDAY, MAY 23, 1912

Afternoon Session—1:30 o'clock

COURT HOUSE

1. Single Incision Vaccination.  
George Dock, St. Louis
2. The Eye an Index to Diseases of the Nervous System.  
Flavell B. Tiffany, Kansas City
3. Remarks on the Treatment of Cutaneous Epithelioma.  
C. D. Scott, St. Louis
4. Anesthesia by the Intratracheal Insufflation Method.  
W. E. Leighton, St. Louis
5. The Differential Diagnosis of Uterine Cancer.  
George Gellhorn, St. Louis
6. Some Objections to Out-of-Door Sleeping.  
M. C. Alderman, Sedalia
7. The Value of Conservative Treatment in Tuberculosis of the Bones and Joints.  
Nathaniel Allison, St. Louis
8. Circulatory Changes Produced by Strong Catharsis.  
C. H. Neilson, St. Louis

## MISSOURI SOCIETY OF MEDICAL SECRETARIES

FIRST DAY—TUESDAY, MAY 21, 1912

Afternoon Session—4:00 o'clock

COURT HOUSE

The Society of Medical Secretaries will meet on Tuesday afternoon, May 21, at 4:00 o'clock in the Court House.

Address. R. H. Goodier, Stoutsville

Address. E. J. Goodwin, St. Louis

History of Medical Organization in Cass County; Method of Conducting the Society and What it Has Accomplished

H. S. Crawford, Harrisonville

The Advantages of Organization in the Medical Profession. Thos. O. Klingner, Springfield

The County Medical Society and the Newspapers. John D. Seba, Bland

How to Manage the Neighborhood Nature Fakers. L. L. Latham, Latham

Some Methods of Stimulating Interest in the County Medical Society. Geo. W. Goins, Breckenridge

Secretaries Experience meeting for general discussion.

Dinner will be served at the Elks Club at 6:00.

## MEDICAL SOCIETY OF THE CITY HOSPITAL ALUMNI, ST. LOUIS

The Medical Society of the City Hospital Alumni held its regular meeting on April 11 in the auditorium of the St. Louis Medical Society. The program consisted of the following papers:

"Pleural Vomica," by Dr. Elsworth Smith, Jr., postponed from previous meeting; "Lantern Slide Review of Cystoscopy, and of Prostatic, Vesical, Ureteral and Renal Surgical Conditions," by Dr. Alexander E. Horwits. Presentation of Case of Pellagra, by Dr. W. H. Mook.

## SOUTHWEST MISSOURI MEDICAL ASSOCIATION

The Southwest Missouri Medical Association will hold its 36th annual meeting at Farmington, May 7-9. A splendid program has been arranged and a large attendance is anticipated. One of the features of the meeting will be an address at the public meeting on Wednesday, May 8, by Dr. George Gellhorn, of St. Louis, representing the Barnard Free Skin and Cancer Hospital of St. Louis. His lecture will deal with the early recognition of cancer. The president of the Society is Dr. T. C. Allen of Bernie, and secretary G. S. Cannon of Fornfelt.

## ELEVENTH DISTRICT—GRAND RIVER—MEDICAL SOCIETY

The Eleventh District—Grand River—Medical Society, met at Salisbury, March 14, 1912. The meeting was called to order at 2 p. m. In the absence of the president and secretary, Dr. G. W. Hawkins, of Salisbury, was appointed chairman and Dr. H. E. Tatum, of Brunswick, secretary pro tem.

Hon. A. W. Johnson delivered the address of welcome on behalf of the city of Salisbury.

Dr. O. T. Morey delivered an address of welcome on behalf of the Chariton County Medical Society, which was responded to by Dr. Crowell, of Kansas City.

Dr. Woodson Moss, of Columbia, Mo., read a very interesting paper on "Status Lymphaticus," and reported a case. The history of the case was about as follows: A young man (student) was found dead in his room one morning. He was lying on his face, with



considerable mucus oozing from his mouth. He had been very quiet in habits; mentally, about the average. It had been noticed that he took no part in the games and plays of the other students. On the night previous to his death, he, in company with some other boys, ate an oyster stew. An autopsy was held and the following pathological conditions were found: Heart considerably enlarged, weighing 372 grams, and dilated; valves normal; muscles pale, flabby, and of opaque, yellowish color. Coronaries show scattered areas of atheroma, well marked. In aorta, at junction of the heart, numerous patches of localized sclerosis. Lungs voluminous and while crepitant throughout, were evidently generally deficient in air space, partly due to excess of serous fluid, partly to general congestion of the organ; no definite solidification. An acute splenic tumor, three times the normal size, swollen and bloody. Liver substance opaque, yellowish and general appearance of cloudy swelling. Kidney substance protruded from capsule when cut. The thymus not only persistent but hyperplastic; weight 58 grams, extended from level of thyroid to the second costal interspace. Lymph-glands: superficial glands of the neck, axillae and groin not affected. All internal lymph-glands, however, were enlarged. There were a few scattered, miliary tubercles in the lungs and liver.

Dr. Moss regarded this death due to disease of the thymus gland. He thinks we should put thymus glands in a group with ductless glands. He believes this disease of thymus gland was due to some infection of la-grippe or sore throat. He thinks this condition accounts for many sudden deaths in children, sudden enlargement of thymus gland causing thymic asthma.

The paper was discussed by Drs. Nicholson, Dorsett, Conover and Robinson.

Dr. Nicholson: There is a probability that this student might have died from other causes. In cases where an enlarged thymus gland is found, the testicle is affected.

Dr. Conover differed from Dr. Moss and said the pathological findings show that the patient had an infection of some kind, and thought the patient died from pulmonary edema.

Dr. Robinson: The function of thymus gland is a calcium combining function. Autopsies on idiots sometimes show absence of thymus gland. This student might have died from some form of chronic auto-intoxication.

Dr. Moss said his final conclusion in this case was that the student died from status lymphaticus plus some acute infection.

Motion carried that Dr. Moss read this paper at the Missouri State Medical Society at Sedalia.

Dr. E. H. Thraikill, of Kansas City, read a very interesting and instructive paper on "The Significance of Hemorrhage from the Rectum," with report of case. In the case mentioned, hemorrhage was stopped by introducing a speculum and making pressure on the bleeding vessel until patient could be chloroformed, the vessel being caught with forceps.

In hemorrhage of the rectum when the blood-vessel cannot be caught, Dr. Thraikill says the best thing to do is to pack the rectum with gauze and leave the patient alone. He has tried a good many local applications but concludes the best thing to do is to pack. In hemorrhage of rectum always suspect ulcerations from cancer, syphilis or hemorrhoids.

Drs. Nicholson and Dorsett discussed Dr. Thraikill's paper.

Dr. J. C. Lyter, Moberly, presented a very interesting paper on "Hyperchlorhydria Gastrica." He said this condition is found in a good many chronic diseases, especially in commencing interstitial nephritis. Dr. Lyter spoke of neurotic hyperchlorhydria. These cases complain of pain one or two hours after meals, or of a gnawing sensation before meals which is relieved by eating. Constipation and very severe headache are

common symptoms. Diagnosis is made by finding an excess of hydrochloric acid. Results are peptic ulcer and dilatation of the stomach.

Dr. Lyter's paper was discussed by Drs. Conover, Robinson, Moss and Crowell.

Dr. Conover: Hyperchlorhydria and hypersecretion come under the same head, and nearly always due to some form of ulcer of the intestinal tract, giving such symptoms as hunger pains which are relieved by alkalies. I have had 20 cases, 10 of which had been operated and duodenal ulcer was found in all. I do not believe in nervous hyperchlorhydria.

Dr. Moss says that he has always been a "doubting Thomas" on nervous hyperchlorhydria. He complimented Dr. Lyter's paper, and said it could not be beat from a medical standpoint and that all these cases cannot be turned over to a surgeon.

Dr. Robinson said we frequently find cases of hyperchlorhydria associated with weak, nervous system and that this condition is the result of the disease and not the cause. He believed most of these cases are surgical.

Dr. Crowell thought most cases of hyperchlorhydria are symptomatic, but should first be treated medically.

Dr. Clapp reported a case of ovarian pregnancy. The patient had menstruated normally and regularly and had menstruated three weeks prior to operation. The case had most of the symptoms of appendicitis and was diagnosed appendicitis. She was operated and instead of finding a diseased appendix, a pregnant ovary was found and removed. Dr. Clapp presented the specimen with the fetus *in situ*.

Drs. Dorsett, Crowell and Nicholson discussed Dr. Clapp's paper and all concurred in the opinion that the case reported was very interesting as ovarian pregnancy is very rare.

Dr. Nicholson said he had operated on 22 cases of extra-uterine pregnancy and that all the cases were tubal; this was the first ovarian pregnancy he had seen. He said Dr. Clapp's specimen was a very beautiful one, as the bed of the fetus was within the ovary itself.

Dr. G. Wilse Robinson, Kansas City, read a very interesting paper on "Causes and Prevention of Insanity." Among the many things he said, the following are a few points he emphasized: That an insane person is a sick man, and should be treated as such. There are more than 12,000 insane persons in this state, and the loss to the state by these insane persons is \$1,000,000 annually. Fifty per cent. is due to preventable causes. The most important cause is the inherited predisposition. Alcoholism is the most frequent exciting cause, and some think 80 per cent. is due to alcohol. Syphilis and tuberculosis play a large part in insanity. Dr. Robinson says we should educate the public how to prevent insanity. We should prevent marriage of the unfit. He is in favor of a law preventing a syphilitic or gonorrheic from marrying while in the infective stage. Applicants for marriage should have a medical examination before marriage. It should be the duty of the state to go into the home of a mentally defective child and investigate the environments, and correct cause and if not corrected to have child enter some school provided for same.

Alcoholics should be treated; a farm should be provided and these patients confined to such a farm and there kept until cured, and then many may be paroled for one year.

Dr. Robinson's paper was discussed by a good many of the physicians present.

Motion carried that this paper be published in the MISSOURI STATE MEDICAL ASSOCIATION JOURNAL.

Motion carried that Grand River Medical Society have reprints of this paper sent to various organizations in the state to be read at their meetings.

Dr. E. J. Goodwin, Secretary of the State Medical Association, St. Louis, made the Society quite an interesting talk, also complimented the Grand River Medical Society on its meeting.

Dr. Goodwin referred to a good many important things of which members of the medical societies of Missouri are negligent, and we should wake up and take notice. Below are abstracts of a few things he said: That Jackson County Medical Society was doing the best work of any medical society in the state, because they have undertaken to run out the quacks, and succeeded in a good many cases. Kansas City had the worst bunch of abortionists known. Most newspapers print anything they are paid for. Scientific articles are published right along with other articles from quacks. Physicians should be better business men, attend to the financial side of their practice and collect their bills more closely. Dr. Goodwin says he has become skeptical as to the appreciation of the laity to the physician's service. Physicians should be more closely organized and protect their own interests. Physicians' services are ten times more valuable to-day than formerly. He insists on members making the JOURNAL OF MISSOURI STATE MEDICAL ASSOCIATION a better journal and we should make a strong effort to fight all the "antis" that are fighting the regular medical meetings.

Dr. Crowell, Kansas City, reported two cases of marked stomach manifestation. The doctor has been kind enough to send members of the Society reprints of the cases reported.

Dr. Robert Goodier, president of the Missouri State Medical Association delivered an address to the Society. He spoke along the line of professional review.

The following officers were elected for the ensuing year: president, Dr. G. W. Hawkins, Salisbury; vice-presidents, Dr. Stanley, Dr. R. F. Cook, Carrollton, and Dr. R. Barney, Chillicothe; secretary, Dr. H. E. Tatuni, Brunswick; treasurer, Dr. J. L. Burke, Laclede; censors: Dr. F. W. Burke, Laclede; Dr. J. C. Shelton, Chillicothe; Dr. C. A. Jennings, Salisbury.

Motion carried that Chillicothe be the next place of meeting of the Eleventh District—Grand River—Medical Society.

Society then adjourned, after which refreshments were served by members of the Chariton County Medical Society.

HARRY E. TATUM, M.D., Secretary.

## TWELFTH COUNCILOR DISTRICT MEDICAL ASSOCIATION

The 12th Councilor District Medical Association held its 7th semi-annual meeting at Cameron, March 28. The program included the following papers:

"Arteriosclerosis," by Tinsley Brown. "Chronic Interstitial Nephritis the Result of Arteriosclerosis," by Spence Redman. "Senile Convulsions the Result of Arteriosclerosis," by C. H. Suddarth. "Angina Pectoris the Result of Arteriosclerosis," by J. H. Rothwell. "Puerperal Eclampsia," by N. M. Wetzell. "Psychotherapy," by G. W. Goins. "Cerebrospinal Meningitis," by M. L. Peters. "Report of a Case," W. T. Lindley.

## BUTLER COUNTY MEDICAL SOCIETY

The Butler County Medical Society met in regular session in the County Clerk's office at Poplar Bluff, at 8 p. m., March 22. Dr. J. M. T. Smith was elected president pro tem. in the temporary absence of Dr. Davidson. Those present were, Drs. Taylor, Smith, Ellis, Mott, Jones, Redwine, Kendall, Williamson, Harwell, Davidson, Seybold, Lowrey and Spaulding.

Dr. Taylor reported a case of a child 5 years old with pneumonia, who later developed leptomeningitis. There was a paralysis of the right side; heart beat was alternately slow and fast and heard to right of sternum; mitral stenosis and aortic insufficiency were present. It was thought the pneumonia had pushed the heart over.

Dr. Davidson reported on a case formerly reported and declared syphilitic. Patient had improved, then developed vertigo with roaring in left ear and a slight conjunctivitis. Eruption is disappearing but patient is tender over base of skull. Ergot and pulsatilla are being given.

Dr. Harwell reported a case of a man who six weeks ago developed a slight fever but temperature now is below normal one-half to one degree. Nothing else seems to be wrong except a general lassitude. No decision was reached as to cause of lowered temperature.

Dr. Ellis read a paper on "Diseases of the Mouth and Salivary Glands."

The anatomy of the mouth and salivary glands was extensively dwelt upon. Wounds and diseases of the mouth usually heal quickly, due to the liberal supply of blood-vessels, but should, nevertheless, be treated antiseptically. Cancer, a disease of middle and old age, begins as a small ulcer with no glandular involvement for some time and gradually extends. Treatment consists in complete removal by Marsden's paste or knife. Catarrhal stomatitis caused by jagged teeth, irritation of any kind, gastro-enteric derangement, measles, etc., is characterized by redness, swelling, presence of minute vesicles and dryness followed by hypersecretion. Treatment is preventative and use of antiseptics. In aphthous stomatitis are found vesicles, eruptions leaving ulcers, pain and fever. It lasts from four to seven days. Membranous stomatitis is more extensive with presence of false membrane and is usually specific. Ulcerative stomatitis is also specific and spreads widely and deeply, forming sloughs. There is present foul breath, profuse salivation, fever, nausea and diarrhea. Thrush is a specific, contagious, fungus of food. Gangrenous stomatitis, rapidly spreading, attacks usually one cheek perforating it, causing prostration and delirium and in 80 per cent. of cases ends fatally. Mercurial stomatitis caused by mercurial idiosyncrasy is characterized by excessive flow of saliva, metallic taste, tender gums with a blue line and fetid breath. Glossitis is caused by any irritant and treated by antiseptic washes. The treatment of all forms of stomatitis consists in absolute cleanliness by mouth washes, treating ulcers with silver nitrate and combating constitutional symptoms. Mumps, an acute, contagious, self-limited affection, is characterized by a swelling of parotid and other glands generally.

This excellent paper was complimented and discussed by doctors present.

The application for membership of Dr. John L. McAlister was reported approved by the committee and it was moved and passed that he be accepted.

Society then adjourned.

WM. SPAULDING, M.D., Secretary.

## CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, April 11, at 2 p. m. The following members were present: S. W. Fair, president; H. S. Crawford, secretary; Drs. Adair, Tout, Elder, Long, Ramey, Triplett and Wright. Dr. H. R. Kuhn of Kansas City has present as a guest of the society.

The following scientific program was carried out in full:

1. "Some Minor Surgery".....B. B. Tout, M.D.  
General discussion.
2. "Let Us Stand Together".....R. D. Ramey, M.D.  
General discussion.
3. "The Surgical Conception of Digestive Disturbances".....H. P. Kuhn, Kansas City, Mo.

The entire program was full of interest to all present; every subject was freely discussed, and many excellent points brought out. The attendance was good, and everything points to a prosperous year for the society.



One new member, Dr. John W. Epler, of Drexel, was added to the roll. This makes our paid membership for 1912 thirty-four. One member is still in arrears for this year, but will be paid by the time the State Association meets, making thirty-five, the largest in our history. There are only nine eligible doctors in the county who are not members now. We earnestly hope to have the most of these with us soon.

H. S. CRAWFORD, M.D., Secretary.

#### HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met in the secretary's office at Fayette, April 6. Present, Drs. Moore, Lewis, Bonham, Wright, Payne and Watts.

Drs. Lewis and Moore were not prepared to read their papers at this meeting so they were postponed to the May meeting.

Dr. Watts read the paper on "Habit as a Cause of Disease," the subject assigned to him to be presented at the State meeting at Sedalia. The paper was complimented very highly and resolution adopted that it be published in the State JOURNAL.

Dr. Lewis made some pertinent suggestions concerning the habit of fee splitting and by vote of the Society the secretary was instructed to notify all members to be present at the next meeting of the Society.

Dr. Moore discussed serum therapy in cerebrospinal meningitis.

The next meeting of the Society will be held at 2:00 p. m. on the first Friday in May.

C. W. WATTS, M.D., Secretary.

#### LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society met at Lebanon, April 8, Dr. C. E. Carleton, of Stoutland, the president, in the chair. Through an oversight of the secretary the date of the meeting was changed consequently the attendance was not so large as usual.

There was some discussion as how to proceed with the prosecution of the illegal practitioners in the county. The subject for the meeting, "Non-Tubercular Affections of the Lungs," was opened by Dr. T. B. Herbert, and participated in by all present.

J. A. McComb was elected to represent the society at the Sedalia meeting. The society meets next June 10 at Lebanon.

J. A. McCOMB, M.D., Secretary.

#### MORGAN COUNTY MEDICAL SOCIETY

Morgan County Medical Society held a reorganization meeting at Versailles, April 4, at which the Councilor of the district, Dr. Frank DeVilbiss, and the secretary of the State Association were present. Other visitors were Drs. G. Wilse Robinson, of Kansas City, Dr. W. S. Allee, of Olean, Dr. Porter Williams of Tipton.

Dr. Robinson read a highly interesting and entertaining paper on "The Causes and Prevention of Insanity." The paper was greatly enjoyed and full of instructive suggestions for the best means of curtailing the extension of this malady. It was freely discussed.

The reorganization was effected with eleven members on the new roster as follows: Drs. Wm. L. Hatler and W. J. Wheat of Barnett; H. E. Blacksten of Excelsior; Clarence D. Osborne of Florence; Charles A. Wiest of Stover; John T. Beale, A. J. Gunn, Robert Q. Kelly, H. N. Lutman, Peter G. Woods, of Versailles; Thos. J. Gibbs, Proctor.

Dr. Goodwin, secretary of the State Association, addressed the meeting at the morning session. He urged the members to hold themselves in strong affiliation with the organized profession of the state and nation

and in close friendly relationship with each other so that misunderstandings and disorganizing influences shall not work to the detriment of the profession in their community. He said the physicians ought to be the most influential citizens in any county and shape public opinion into proper channels; this can be done easily if physicians would work in harmony with each other and carry themselves in accordance with the principles of ethics. There are of course unethical men in the profession in every community but these persons should be ignored and not permitted to join the society on account of their disorganizing influence. If the people want to employ the quackish doctor it is their right to do so but it should be made known in the community that such doctors are not of the same stamp as the men who live and practice according to the higher principles of code that governs the conduct and practices of the members of the county medical society.

Dr. DeVilbiss urged the members to maintain their organization and pointed out the numerous benefits that come out of close and frequent association at society meetings.

Officers for the year were elected as follows: President, A. J. Gunn, Versailles; vice-president, Peter G. Woods, Versailles; secretary-treasurer, Clarence D. Osborne, Florence.

#### RALLS COUNTY MEDICAL SOCIETY

The Ralls County Medical Society met in New London, April 25.

Officers for 1912-13 were elected as follows: President, W. T. Waters; vice-president, Fred Walter; secretary, T. J. Downing; delegate, Harry Norton.

Two papers were read and discussed generally. Seven doctors were present.

Our next meeting will be at Spalding Springs, some time in July.

T. J. DOWNING, M.D., Secretary.

#### RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met March 25, at Moberly and reorganized by electing the following officers: D. A. Barnhart, president; C. K. Dutton, vice-president; S. P. Towles, secretary-treasurer.

The president appointed the following censors: S. C. Adams, Huntsville; J. C. Lyter, Moberly; J. P. Allen, Cairo.

The following members were present: Drs. Clapp; G. O. Cuppage; L. A. Bazan.

The Society will meet in Moberly April 25.

S. P. TOWLES, M.D., Secretary.

#### SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session, March 11, the president, Dr. A. E. Gore in the chair. Secretary, Dr. J. R. Hall being absent, Dr. G. A. Aiken of Malta Bend was elected secretary pro tem.

A paper entitled "Scarlet Fever" was read by Dr. J. E. Connell of Marshall. Dr. Connell handled his subject in a very able way and discussed all phases of this question. The paper was much enjoyed by all present.

The secretary pro tem read an article on "Treatment and Prevention of Measles and Scarlatina." This article was a copy from the *British Medical Journal* and written by Melne. A general discussion of scarlet fever followed.

The following program was selected for the next meeting: "Epidemic Cerebrospinal Meningitis," by Drs. Manning and Scrutchedfield of Marshall.

G. A. AIKEN, M.D., Secretary pro tem.

# SCHUYLER COUNTY MEDICAL SOCIETY

Schuyler County Medical Society held its regular quarterly meeting at Glenwood, April 22, with the following members present: Drs. W. F. Justice and W. A. Potter, of Lancaster; J. H. Rambo and J. H. Keller, of Queen City; J. B. Bridges, Downing; Dr. G. S. Wilson, of Kirksville, Adair County, was a visitor.

Dr. J. H. Rambo read an interesting paper entitled "The Treatment of Goiter by Hypodermic Injections of Iodin." The paper was highly appreciated and brought out a discussion from all members.

Dr. W. A. Potter read a paper on "Cerebrospinal Meningitis." This paper was splendidly prepared and very interesting. It was discussed thoroughly each member taking part.

The whole meeting was a very profitable and instructive one and enjoyed by all present.

The next meeting will be held at Queen City, July 1.  
J. B. BRIDGES, M.D., Secretary.

# SCOTT COUNTY MEDICAL SOCIETY

The following officers were elected by Scott County Medical Society for 1912:

President, W. H. Westcoat, Oran; vice-president, P. S. Late, Morley; secretary-treasurer, G. S. Cannon, Farnfelt; delegate, G. S. Cannon, Farnfelt.

Next meeting will be held at Benton in July. Interest in Society is below par.

G. S. CANNON, M.D., Secretary.

# SHELBY COUNTY MEDICAL SOCIETY

Shelby County Medical Society met in Shelby, April 23. Dr. Vaughn reported a case of purpura in a lady 42 years old probably due to previous tonsil infection; patient also had some rheumatic symptoms. An interesting discussion followed the report relative to the tonsil being the place of entry for the infectious agents of purpura and rheumatism.

Dr. Smith reported a case of exophthalmic goiter in a young woman who before the attack was unusually well and strong. The emaciation and rapidity of pulse characterizing this disease were present. She was operated but as yet results could not be ascertained.

Dr. Battersby reported an interesting case of angio-neuroma.

Officers for 1912 were elected as follows: President, Charles M. Chapman, Shelby; vice-president, J. R. Daniel, Clarence; secretary-treasurer, A. M. Wood, Lenton; delegate, R. S. Battersby, Shelby; censor, A. T. White, Lakenan.

A. M. WOOD, M.D., Secretary.

# WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Niangua, Wednesday, March 20. Those present were Drs. Beattie, Highfill, Williams, Schlicht, Bruce, Atkins and McHaffie.

Dr. W. R. Beattie was elected to attend Kansas City Post-Graduate Medical School as member from Webster County.

Dinner was had at noon recess at Niangua Hotel. After dinner the following papers were read and discussed:

Dr. Atkins on "Eclampsia."

Dr. Bruce on "Placenta Prævia."

Dr. Williams on "Retarded Labor."

It was voted to hold our next meeting in Marshfield on June 19. This meeting is to be public and the following papers read:

"The Pure Food and Drugs Act."

"Home Hygiene and Sanitation."

J. R. BRUCE, M.D., Secretary.

# BOOK REVIEWS

Don't forget to ask the ticket agent for a "certificate" when purchasing ticket to Sedalia for the annual meeting, May 21-23.

A TREATISE ON TUMORS. For the use of Physicians and Surgeons. By Arthur E. Hertzler, M.D., of Kansas City, Mo., Assistant Professor of Surgery in the University of Kansas. Octavo, 728 pages, with 538 illustrations and 8 plates. Cloth, \$7.00, net; half Persian morocco, gilt top, de luxe \$9.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

Dr. Hertzler has given the profession an excellent work. His experience as a teacher and surgeon has enabled him to connect the clinical application with the scientific side of this important subject. The book is an eminently practical reference work, the arrangement making it easy to find the desired subject without delay. He has probably made the text as definite as it is possible to do, considering the vast number of unsettled questions regarding tumors.

The literature has been well covered and uncertain experimental work has not been permitted to fill up the book. Out of the vast amount of literature collected the author has given only the more important references. Many citations to the literature, however, enable one to find further information.

One is struck by the fact that much of the old, indefinite nomenclature and classification found in former works on the subject is still retained and very little new matter appears, showing how little progress really has been made in tumor study. Processes allied to tumors are discussed and differentiated from tumors as far as possible.

The second part, on the regional consideration of tumors, is excellent and greatly enhances the reference value of the book. The illustrations are new. They are clear and well illustrate the text matter. Dr. Hertzler has given us, to date, in a readable and readily accessible manner, the facts about tumors as far as it is possible to gather them. The work deserves popularity.

THE FRIENDS OF THE INSANE. The Soul of Medical Education, and other essays. By Bayard Holmes, M.D., Chicago. Pp. 270. 8vo, cloth. Lancet Clinic Pub. Co., Cincinnati. 1911. \$1.00.

These essays appeared in the *Lancet Clinic* at different times. The first half of the collection is practically an elaboration of the first essay in the book from which the whole takes its name, and is devoted to the consideration of the various phases of the condition of the insane and their relation to society.

The last half of the volume contains essays on a variety of medical subjects.

The volume is decidedly interesting, the style is lucid, and the arguments convincingly presented. An appendix contains author's bibliography.

PRACTITIONER'S VISITING LIST FOR 1912. Thirty Patients per Week. Pp. 192. Leather. Lea & Febiger, Philadelphia. \$1.25.

This visiting-list contains the customary tables, measures, etc., as well as other valuable data. The record portion contains ruled blanks suitable for entering details of professional business and case-notes. It makes a very neat pocket book.



CESARE LOMBROSO: A MODERN MAN OF SCIENCE. By Hans Kurella, M.D., Author of "Natural History of the Criminal," etc. Translated from the German by M. Eden Paul, M.D. Pp. 194. Cloth. Svo. New York. Rebman Co. 1911. \$1.50.

The author of this volume has given us an analytical review of the life of the great criminologist. Kurella says Lombroso was led to formulate his doctrine of the criminal as a natural consequence of his idea that a man's mode of feeling is determined by his physical constitution and that in his bodily structure this constitution must perforce find expression.

Consideration is also given to Lombroso's work as a social reformer and an anthropologist. The book makes very interesting reading. The translation is smooth and the typography is excellent.

HANDBOOK OF PRACTICAL TREATMENT. By many writers. Edited by John H. Musser, M.D., LL.D., and A. O. J. Kelly, A.M., M.D. Vol. III. pp. 1095. W. B. Saunders Co. Philadelphia and London. 1912.

The completion of this work calls for congratulation to all concerned, editors, contributors, and publisher. It is one of the most comprehensive works on practical therapeutics ever attempted, and perhaps the very largest ever compiled in America. The contributors to its many sections are all authorities in their special fields.

The third volume includes constitutional diseases, diseases of the respiratory, digestive, urinary, and nervous systems, together with chapters on diseases of the muscles and mental diseases.

It is certain that no practitioner can afford to be without this work.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the year's progress in medicine and surgery. Under the general editorial charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Vol. X, Nervous and Mental Diseases. Edited by H. T. Patriek, M.D., Peter Bassoe, M.D. Series 1911, Chicago. Year Book Publishers. This number \$1.25.

The contents are classified under main headings as follows, with subheads. Symptomatology; Neuroses; Diseases of the Brain and Meninges; Diseases of the Spinal Cord; Diseases of the Peripheral Nerves; Diseases of the Muscle, and Miscellaneous. These subjects are succinctly discussed with reference to the latest literature. Consideration of Mental Diseases follows with an allotment of thirty-one pages.

PRACTICAL ELECTRO-THERAPEUTICS AND X-RAY THERAPY. With chapters on phototherapy, x-ray in eye surgery, x-ray in dentistry, and medico-legal aspect of the x-ray. By J. M. Martin, M.D., Professor of Electro-therapeutics and x-ray methods in the Medical Department of Baylor University, etc., etc., cloth. pp. 446. Illust. St. Louis, C. V. Mosby Co. 1912. \$4.00.

The diagnostic and therapeutic aspects of electricity are practically and engagingly given in this work. The field has been intelligently scanned and the aim of the work, to give the busy physician a coherent understanding of the subject has been happily realized. The book contains numerous illustrations of x-ray procedure. The volume is handsomely bound, and the text is in large and distinct type.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by H. A. Hare, M.D., assisted by L. F. Appleman, M.D. Vol IV. December, 1911. pp. 326. Philadelphia and New York, Lea & Febiger. 1911. Per year \$6.00.

This volume contains articles on Diseases of the Digestive Tract and Allied Organs; the Liver; Pancreas and Peritoneum; Diseases of the Kidneys; Surgery of the Extremities; Shock; Anesthesia; Infections; Fractures and Dislocations; Tumors; Genito-Urinary Diseases, and Practical Therapeutic Referendum.

The discussions in Progressive Medicine are always the latest word on the subjects considered.

NEW AND NONOFFICIAL REMEDIES. The 1912 list of New and Nonofficial Remedies has just been issued by the Council on Pharmacy and Chemistry of the American Medical Association.

Members will do well to supply themselves with a copy of this little book which contains the list of those articles that comply with the rules of the Council. The rules with explanatory comments are given in the introduction.

The Council was established in 1905 for the purpose of protecting the profession against unscrupulous manufacturers, and designs "to prevent fraud, undesirable secrecy and the abuses which arise from advertising to the laity."

MICROSCOPY, BACTERIOLOGY, AND HUMAN PARASITOLOGY.

A manual for students and practitioners. By P. E. Archinard, A.M., M.D., Bacteriologist Louisiana State Board of Health and City Board of Health, New Orleans. Second edition, revised and enlarged. 12mo 267 pages. Illustrated. Cloth. Lea & Febiger, Philadelphia and New York, 1912.

The scope of this useful little volume has been extended in the second edition so as to include certain bacteria-like protozoa, and consequently it makes an appeal to the advanced student as well as the general practitioner who desires to extend his knowledge in this field. The book will be found especially valuable in connection with post-graduate lecture work.

The carefully constructed quizzes which follow each chapter will be of great assistance in assimilating the contents of each respective section.

PHYSIOLOGY. A Manual for Students and Practitioners.

By A. E. Guenther, Ph.D., Professor of Physiology in the University of Nebraska, and Theodore C. Guenther, M.D., Attending Physician, Norwegian Hospital, Brooklyn, N.Y. New (2d) edition, thoroughly revised. 12mo, 269 pages, illustrated. Cloth, \$1.00 net. The Medical Epitome Series. Lea & Febiger, Publishers, Philadelphia and New York. 1912.

This little book of fourteen chapters is intended to present the fundamentals of physiology in such concise form as will commend itself to the requirements of the student.

The student will find the book of undoubted assistance and the chapter quizzes aid greatly in appropriating its contents.

The second edition has been carefully revised both as to text and illustration.

# THE JOURNAL

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A. W. McALESTER, Jr., M.D.  
M. A. BLISS, M.D.

### ORIGINAL ARTICLES

#### OPERATIVE TREATMENT OF HYPERTHYROIDISM \*

WILLARD BARTLETT, M.D.  
AND  
W. P. GLENNON, M.D.  
ST. LOUIS

The practice of removing a goiter to relieve the symptoms of hyperthyroidism is not ideal, neither is it ideal to remove any other structure or

Cytotoxic serum in the treatment of hyperthyroidism seems beneficial in relieving the symptoms in the very early stages of acute Graves' disease, or in exacerbations of a subacute attack, provided no secondary changes have taken place in the organs. Little is claimed for it in the other stages of the disease.

It has never been shown that a serum can be made to act primarily on a selected organ, and in all probability this serum simply acts as an antidote to poison already secreted; therefore, while the symptoms subside, the cause remains.

With our modern, well-equipped hospitals, our knowledge as to the cause and prevention of shock

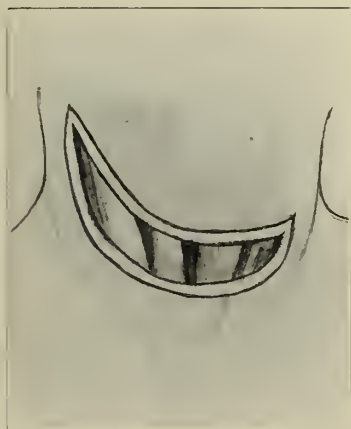


Fig. 1.—The skin incision for right partial thyroidectomy.

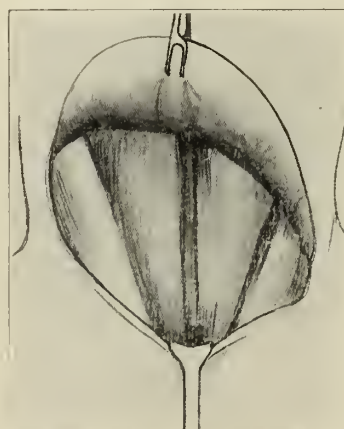


Fig. 2.—Retraction of the skin and platysma flaps.

organ, normally part of the human body, for the cure of disease. Let us therefore hope that the day is not far distant when more scientific methods may be developed than those of eliminating a part to save the life of the remaining part.

In our present state of doubt as to the etiology and development of exophthalmic goiter it would seem that surgical intervention is justifiable and even demanded in the majority of patients afflicted with this disease.

and our ever-improving operative technic, we have reduced the one-time crude, and too often fatal procedure of excising a goiter, to a now comparatively simple, and, in results, encouraging mode of treatment. So we can with considerable confidence inform a patient suffering with Graves' disease (provided of course the disease has not been fatally neglected), that surgical methods will relieve her symptoms, and in all probability restore her to a normal state of health.

The cause of hyperthyroidism is unknown, but it is generally accepted that for some reason an

\* Read before the St. Louis Medical Society, March 9, 1912.



overactivity, with or without enlargement of the gland, takes place with its resultant hypersecretion, and this hypersecretion produces the various nervous, cardiovascular and other well-known symptoms and signs. That the increase of internal secretion is the direct cause of the symptoms observed would seem supported by the following facts: (1) Susceptible animals show identical symptoms after repeated injections of preparations from such overactive glands. (2) Ligature or incision of these glands, in man, is followed by partial or often complete disappearance of the symptoms.

In a milder type of the disease than the above mentioned, when cachexia is not marked (and gastro-intestinal organs are therefore in at least fair condition), and when the blood-pressure is not low in the standing position, surgical treatment may be considered. We must proceed cautiously with the operative work on these latter cases. Under cocain or gas anesthesia, ligation of the superior thyroid vessel, on one side, with similar treatment a week later of the opposite vessel, may be undertaken. Then after weeks or months of rest and treatment according to the

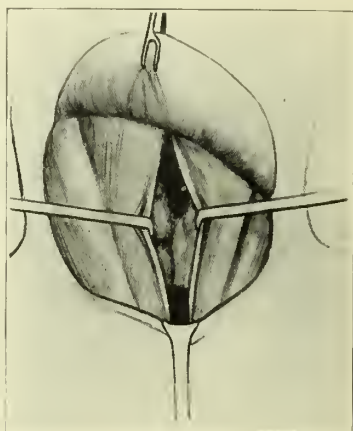


Fig. 3.—Incision of cervical fascia in mid-line to expose the goiter.

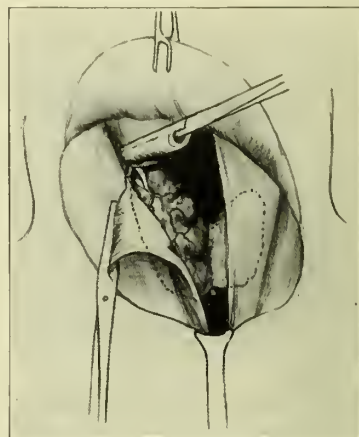


Fig. 5.—Shows sternohyoid muscle divided transversely.

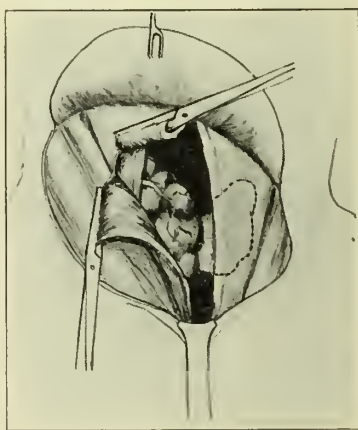


Fig. 4.—Transverse division of sternohyoid muscle above the entrance of nerve-supply to facilitate exposure of the superior thyroid artery.

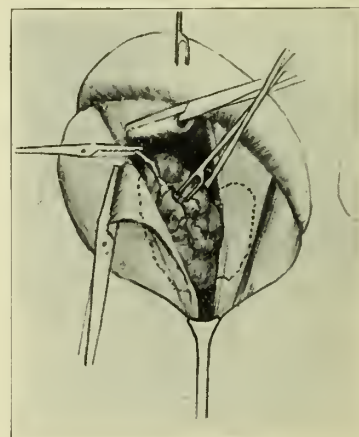


Fig. 6.—Shows the superior thyroid artery clamped.

It may be noted in passing that Bircher claims to have produced all the symptoms of this disease in dogs by implantation of thymus tissue into the abdomen.

In selecting cases for surgical intervention we should remember that patients with advanced cardiac dilatation and disturbed compensation, permanent tachycardia, constant low blood-pressure and cachexia with restlessness beyond the patient's control, even for a moment, are too near death to be regarded as surgical possibilities.

patient's progress, excision of the gland may be performed. This is known as the "graduated operative method."

If the heart boundaries are fairly normal, and anemia not advanced, thyroidectomy without preliminary ligation of the vessels may be advised, even though tachycardia be present and nervous symptoms marked.

Too much credit cannot be given Crile for suggesting that we "steal" such goiters. Our method of doing this at St. Anthony's Hospital

is one which keeps the patient in absolute ignorance of the day of her operation, and prevents her even seeing an instrument, operating-room or surgeon in working attire. She enters the hospital Monday and is told that the operation will take place on Saturday if she gets into satisfactory condition meanwhile. We really intend to operate on Friday, and thus spare her the sleepless night which she would naturally suffer preceding Saturday's operation.

Now there are several things which, if carried out in the usual manner, would naturally betray

as she has had a hypo of atropin every morning at 9 o'clock since Monday. Fifth, now she naturally expects a few whiffs of gas at 9 o'clock, as she has had the same on Monday, Tuesday, Wednesday and Thursday mornings as a supposed preliminary treatment to get her in condition for what she thinks is going to transpire on Saturday. The anesthetist simply pushes the gas until she is unconscious; then she is removed to the operating-room and kept unconscious until she is again in bed. The first thing she does on awakening is to thank us gratefully for sparing her the worst

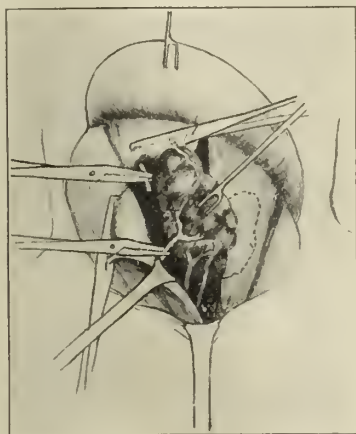


Fig. 7.—Shows the inferior thyroid artery clamped.

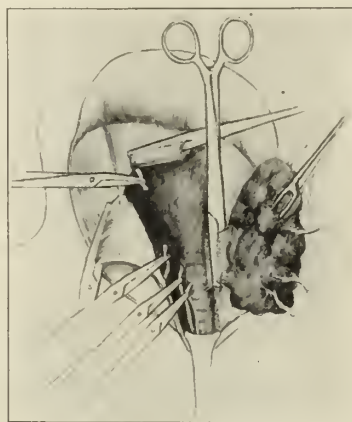


Fig. 9.—Shows the isthmus clamped.

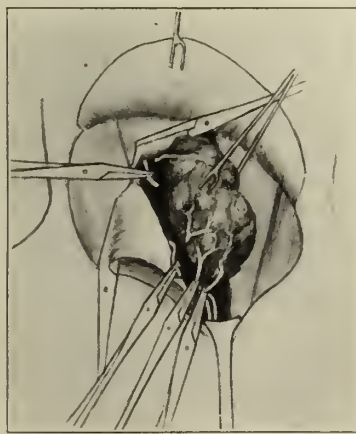


Fig. 8.—Shows the thyroideaemia vessels clamped.

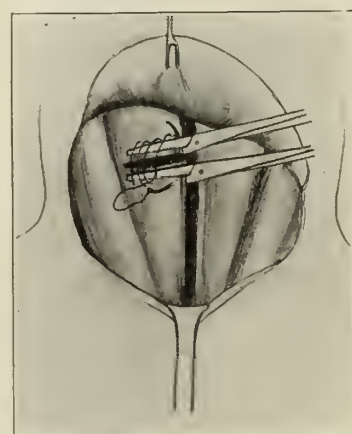


Fig. 10.—Illustrates the method of muscle closure.

our little subterfuge. They are, first, castor oil; second, no breakfast; third, preparation of the skin; fourth, hypodermic; fifth, transportation to the operating or anesthetizing room.

First, cathartic: Instead of the customary dose of castor oil the night before the operation, she is given a dose of licorice powder every night. Second, she gets such a light and early breakfast every morning that it is not necessary to interrupt it on the day of the operation. Third, the skin is prepared with iodine when she is anesthetized. Fourth, she is not surprised at the hypo of morphin on Friday morning at 9 o'clock,

feature of a surgical operation, namely, suspense, fright and nervous excitement, which are so common in this class of patient.

An operator's experience is of particular value in the surgical treatment of Graves' disease. Anatomic conditions may vary so much that the operation may be simplicity itself or, as is often the case in *x*-rayed, injected and previously ligated goiters, almost insurmountable difficulties may be encountered in the way of hemostasis. Thinness, increased size and fragility of veins present special problems for delicate handling.



The cooperation of a well-trained personnel is indispensable if the operation is to be completed within a reasonable time limit.

Postoperative hyperthyroidism and shock may be considerably diminished and often avoided, first by using gas-oxygen anesthesia, or what is sometimes even better, cocaine infiltration combined with hypnotic suggestion; second, speedy operative work with extreme gentleness in manipulating the structures in the field; third, thorough control of hemorrhage; fourth, sharp instrumental dissection throughout, thus limiting trauma; fifth, drainage sufficient and prolonged until no suggestion of moisture is evident around the incision.

Not all cases treated medicinally are benefited, although many are. In those cases not benefited the chance of surgical success may be lost owing to delay. When treatment is apparently effective the original causative factor remains.

There is a mortality in medical cases, while the time lost and expense are prohibitive in some. Months in bed result in muscular atrophy and

she is well; or on the other hand when some symptoms present themselves, not referable in the least to the original goiter, that she is much worse.

In all sixty-nine operations were performed on sixty-four patients; five were operated on twice; six were ligation cases, and there were fifty-eight incisions.

Of the sixty-four patients there were five deaths due to operations, and five remote deaths, i. e., due to other diseases; fifty-four remain, and of these only forty-six can be traced, of which thirty-three say they are cured. (The few examined by us are well.) Ten say they are improved and three are unimproved; eight cases cannot be traced.

We are far from calling a patient well simply because she says she feels all right. However, no one can deny that there is a certain distinct gain for the patient who can exchange misery for a feeling of subjective well-being.

In view of this, we are quoting in full a dozen replies which we had to inquiries sent out recently to patients on whom we had previously operated.

No. 1.—Two years and two months after partial thyroidectomy: "I have been in the best of health since my operation. Goiter has not come back, I am now married and mother of a fine baby boy, seven months old, who weighed twelve pounds at birth."

No. 2.—Two years after partial thyroidectomy: "I am glad to state that since my operation, I have been better in every way. My health is the best now than I have had for several years."

No. 3.—Three years and ten months after partial thyroidectomy: "Except for some stomach trouble, I have been very well, and am now 79 years of age."

No. 4.—Two years and eight months after partial thyroidectomy: "At present time I am feeling very well, and have no trouble with my neck. I am much heavier now than at the time of my operation."

No. 5.—Two years and eleven months after partial thyroidectomy: "The opposite lobe has enlarged to the size of a small lemon. I feel perfectly well if I do no hard work, because when I work my feet swell."

No. 6.—Two years and nine months after partial thyroidectomy: "I am glad to let you know I am well of my throat trouble, only the left side is larger and itches often. I have gained much in weight and strength."

No. 7.—Two years and nine months after partial thyroidectomy (no exophthalmus): "I feel perfectly well, with no symptoms of Graves' disease except a throbbing in the other side of neck when tired."

No. 8.—Two years and ten months after partial thyroidectomy: "Palpitation disappeared after operation, but I was very nervous, and am now to some extent. I do my own housework and washing. I look perfectly well and there is no sign of the goiter."

[Pulse is 82. Evidently sick headache symptoms present.—Authors.]

No. 9.—Four years and five months after partial thyroidectomy: "I am at the present time in perfect health, nothing but a slight scar to remind me I ever had a goiter."

No. 10.—One year and eleven months after partial thyroidectomy: "My health has been fine the last year since the operation. Of course it took me the first months to start improving. I am having excellent health now."

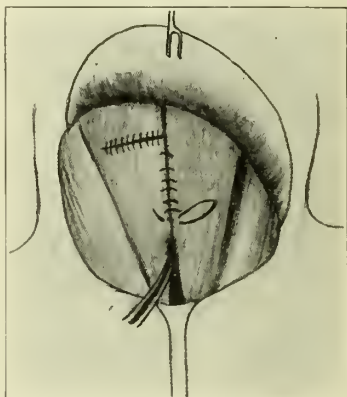


Fig. 11.—Illustrates muscle closure complete.

rarefaction of bones, a matter which cannot be treated lightly. Melancholia is not unknown as an occasional development in the course of such treatment.

There is some relief in subjective symptoms, at least in all cases treated surgically, and many are completely cured; those that are not cured are usually made useful citizens, and feel subjectively well even though they may not be normally strong and may have some tachycardia remaining.

In recording the statistics of cases operated on within the last few years we do so with some diffidence as they are incomplete and probably somewhat unreliable for the following reasons: first, some cases we could not trace; second, most cases we did trace could not personally be observed and we had to depend on written statements of the patients themselves or the attending physician. Statements are sometimes unintentionally inaccurate because a patient may believe that when the most annoying symptoms have disappeared,

No. 11.—Three years and eight months after partial thyroidectomy: "I am glad to say the operation has thus far proved to be a great success."

No. 12.—Three years and eight months after partial thyroidectomy: "Since I answered your postal I was obliged to undergo an operation for hernia that was of long standing. Of course, this was a new shock to my nerves, but I got over it nicely, and after two months was able to resume partial duties, teaching several hours a day. Last September I took up regular class work. My nerves are not extra strong and I suffer very frequently from sick stomach and headache, but attribute the cause mainly to indigestion."

A SURGEON'S IDEA OF THE PROPER DISTRIBUTION OF THESE CASES AS FAR AS MEDICAL OR SURGICAL TREATMENT IS INDICATED

I. Medical Cases.

A. Mild type (able to work).

- a. Support of a family.
- b. Pregnant woman.
- c. Nursing mother.

B. Inoperable type (greatly disturbed compensation).

- a. May improve to point of operability by restoration of compensation.
- b. Hopeless cases.

II. Surgical cases.

A. Thyroidectomy.

- a. Any patient without cardiac dilatation.
- b. Any patient without cardiac dilatation or extreme toxicity.

B. Ligation.

- a. Most severe type with dilatation but without disturbed compensation.
- b. Extremely toxic individuals.

CHRONIC COLONIC INTOXICATION \*

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Originally the intestine consists of a simple tube attached to the parietes in the median line both dorsally and ventrally by a double membrane, viz., the dorsal and parietal mesenteries. Through the dorsal mesentery the blood-vessels reach the intestine. Most of the ventral mesentery soon disappears. As the intestinal tube grows it forms a loop the apex of which lies in the umbilical cord. The proximal part of the loop grows more rapidly than the distal on which a bud soon appears to form the cecum. The tube distal to the cecum forms the colon; the lengthening of the intestinal tube compels a change in its arrangement. That portion which forms the small intestine is thrown into coils to facilitate packing in the abdominal cavity.

\* Read at the Medical Association of the Southwest, 1911.

The large intestine also changes its position by a process of torsion; the cecal end of the large intestine is thrown over the small intestine until it lies under the liver in the northwest corner of the abdomen. About the seventh month or later the cecum descends to the right iliac fossa and now we have the ascending, transverse and descending colon.

Note that all the colon is still provided with a free mesentery, but now the mesenteries of the ascending and descending colon are plastered against the parietal peritoneum and become fused to it. Thus these two portions of colon are normally extraperitoneal posteriorly.

The descent of the cecum and adjacent colon and the fixation of the latter to the parietes, being late phenomena of development, are very often incomplete. The cecum may fail to descend or may do so only in part. It may be absolutely free from connection with the parietes; it may be attached by various peritoneal bands or it may be as thoroughly glued to the abdominal wall as the continuation of the colon.

The ascending colon itself may fail to unite to the parietes thus retaining its original meson or be united to the parietes by various bands showing partial fusion.

The terminal portion of the ileum taking part in the late changes of position of the cecum, must also be subjected to the cecal tendency to anomaly. It may be worth while to note a few of the anomalies of the cecum, ileum and ascending colon which may give rise to trouble requiring surgical intervention.

The colon may retain its meson but the cecum may become adherent to the parietes near the kidney. As the cecum gravitates to the pelvis or into the pelvis the adhesions stretch forming secondary mesenteries.<sup>1</sup>

In development, the ileum may form abdominal connections with the parietes, interfering with its free mobility. A young lady suffered for three years from recurring attacks of abdominal pain, without nausea and generally without fever. After a purgative was taken pain commonly preceded evacuation. Tenderness and slight rigidity were present a trifle below McBurney's point. The diagnosis of appendicitis had been made by several physicians. The absence of several important symptoms of appendicitis led me to diagnose an ileac kink. Mobilization of the ileum by division of the band has led to a complete cure, apparently.

A very similar condition was found in a physician who had suffered from obstruction fourteen years before. Besides evident symptoms of gall-stones the patient noticed much pain and soreness in the abdomen after he took a purgative; when he felt something "pass" or "give way" he knew from experience that he would soon have an evacuation and feel well. On opening the

1. Zuckerkantss Anat., p. 362, Figure 326.



abdomen I found (besides gall-stones) an ileo-pelvic band as described above, but also a wide, flat band of tissue containing blood-vessels stretching from the anterior surface of the cecum to the external parietes. In this case the ileo-pelvic band went far down in the true pelvis and was probably the cause of the obstruction fourteen years previously. Mesosigmoiditis was also noted.

The cecum may descend lower than normal and may be very mobile. At the same time the appendix may have a short meson. The weight of the cecum dragging on the meso-appendix may give rise to symptoms of appendicitis. Removal of the appendix gives relief because of the division of its meson. Full relief may not be attained because some of the symptoms may be due to the long mobile cecum.

Wilms claims great results from cecopexy in mobile cecum simulating appendicitis, but where the cecum is not only ptosed but dilated he advises ileotransversostomy; others advise a combination of cecopexy and cecoplication.

Cecum mobile cannot be considered in itself a pathologic entity as it was present in 67 per cent. of a series of autopsies by Dreyer.

The sigmoid flexure is normally freely mobile and gives rise to no trouble, but if the base of its meson is contracted by mesosigmoiditis, various troubles, even volvulus, are liable to occur. So it seems to me that a freely mobile cecum continuous with a freely or even fairly mobile ascending colon is free from danger; but if the mobile cecum is connected with a fixed colon or has bands over its base, as in the case of the physician I have related, then it is quite possible for the cecum to become folded over the band or twisted on itself and so give rise to serious trouble. A number of cases bearing out this view have been described.

John G. Clark believes ptosis of the colon (cecum, transverse and sigmoid) is generally congenital and that apparent ptosis of the transverse colon is often merely due to that intestine being so long that for packing purposes it must lie low down in the abdomen.

The developmental anomalies described commonly cause no trouble, but occasionally they do and the symptoms either mimic chronic appendicitis or are distinctly referable to the absorption of toxins from stasis in the large intestine.

Chronic intestinal stasis may be due to any cause which impedes the onward progress of intestinal contents, but does not cause complete or acute obstruction. Toxemia from stasis is one of the commonest conditions met by the physician. Arbuthnot Lane has for some years studied this subject but only recently have his teachings attracted much attention. He thinks chronic constipation or better, colonic intoxication, is due to ptosis of the colon or to the formation

of angulations or kinks which impede the proper progress of the intestinal contents. These result from the erect posture, habits of civilization, errors in diet, inattention to obtaining regular and proper evacuations, etc. The cecum, for example, becomes overloaded and consequently dilated and elongated, and falls into the pelvis. The portion of cecum above the pelvic brim is retained in a position of abnormal fixity by the development of adhesions between the outer side of the large bowel and the parietes. The adhesions occasionally constrict the bowel and render it liable to be obstructed; they also immobilize and pull on the appendix. Lane believes that both the hepatic and splenic flexures are pulled abnormally upward by the formation of peritoneal bands. The transverse colon becomes ptosed, descending even into the pelvis. This ptosis inevitably accentuates the acuteness of the hepatic and splenic flexures causing more or less obstruction.

Adhesions form between the ascending and descending colon on the one hand and the ascending and descending portions of the transverse colon.

I have often noticed a deposit of scar tissue on the outer leaf of the mesosigmoid (mesosigmoiditis, mesenterial *Schrumpfung* of Virchow) which immobilizes the sigmoid in varying degrees and causes more or less obstruction, even volvulus.

The ptosed cecum is supported by various adhesions attached to it and to the appendix, but it may also be supported by a thickening or deposit of scar tissue on the under surface of the meso-ileum which acts through the interposition of the terminal portion of the ileum. Lane has described this formation and its importance in immobilizing and kinking the ileum. It is now often spoken of as Lane's kink. The effects produced by Lane's kink are identical with those produced by the ileopelvic bands which I have described as developmental anomalies, and possibly both Lane and I are referring to the same thing. I have seen contractions in the meso-ileum which pull the terminal ileum upward and correspond exactly to Lane's description, while the ileopelvic bands pull the ileum downward and show no evidence of sclerosis.

In 1905<sup>2</sup> I described a condition simulating chronic appendicitis in which the colon and cecum are covered by a delicate curtain or web of membrane, similar to, or identical with, the spider-web adhesions about the gall-bladder described by Morris. These membranes become more marked toward the hepatic flexure and contain numerous delicate blood-vessels. The membrane may cover the transverse colon and sigmoid but is most common on the ascending colon and the transverse limb of the transverse colon. It is easily stripped off the intestine leaving usually a smooth surface.

<sup>2</sup> Monthly Cyclopedica of Prac. Med., viii, 341.

J. N. Jackson has given a good description of this membrane.<sup>3</sup> It is usually so delicate a fiber, a spider web, that I have not been able to assure myself as to whether its removal leaves the peritoneum intact or not. Hertzler<sup>4</sup> believes the condition one of "varicosity of the peritoneum" due to a more or less distant inflammation and that the membrane itself consists of peritoneum mobilized by a hyaline degeneration of the sub-peritoneal connective tissue. The membrane can and does cause pressure on the colon and unite the ascending to the transverse colon.

In severe cases of colonic intoxication more or less acute exacerbations come on without apparent cause. There is abdominal distention especially along the line of the colon; painful dragging in the abdomen and pelvis; ill-defined discomfort; tenderness and rigidity about McBurney's point. Fever may or may not be present. There is a history of constipation alternating frequently with diarrhea. Between attacks there is greater or less discomfort and pain. Usually indigestion is noted with impaired nutrition. Neurasthenia is the general diagnosis. The skin is dirty looking and stained (not jaundiced) especially about the body-folds and around the eyes. The hands and feet are cold. Perspiration is common and often has a disagreeable odor. Time will not permit me to speak of some of the remote results of the intoxication.

As an example of chronic colonic stasis the case of E. E. may be of value:

The patient, a boy of 15, was admitted to hospital in January, 1909, complaining of loss of weight; gas on his stomach; distress from bloating after a full meal, less distress when on a restricted diet. Present illness began in February, 1907. Weight prior to that time 115, now only 88 pounds. There is progressive weakness. Temperature 98, pulse 72. Patient sleeps well, has a good appetite but fears to eat because of consequent suffering. Urine, Sp. Gr. 1030, acid. No albumen, no sugar, no excess of indican. Blood, hemoglobin 90 to 100 per cent., red 4,760,000, white 6,600. Polynuclears 49.5 per cent. Mononuclears 21.5 per cent. Large lymphocytes 6 per cent. Skin is brownish in color. Abdomen is retracted and muscles rigid. Pain is not constant and not great, mostly discomfort. Occasionally there is pain in both inguinal regions and under the right ribs. Neurasthenia is very marked. He has no energy, stays about the house, is interested in nothing but his ailments, enjoys bad health. Various and many methods of treatment have been used, including a residence in New Mexico, all without benefit.

March 9, 1909: Exploratory laparotomy. Gall-bladder and stomach normal. Transverse colon large, low, full of feces (this in spite of thorough and frequent flushing). Ascending colon mobile, covered with spider web membrane (descending portion transverse colon also covered with membrane). Cecum free from membrane, mobile. Appendix normal. Removed appendix, performed cecostomy. Patient left the operating table in very poor condition, but recovered. Through the cecostomy opening the colon was regularly flushed and the patient regained his health. Whenever lavage was omitted for a week or more then symptoms reappeared. The cecostomy opening was per-

mitted to close in December, 1909, and subsequently the patient became lethargic, lost his appetite, had a bad taste in his mouth and the skin, which had become clear once more, assumed its dirty hue. Laxatives were a regular necessity.

In May, 1910, I did an ileosigmoidostomy with the happy result that in June, 1911, the patient was in perfect health, cared nothing about his digestion, took no laxatives, played base ball regularly.

Very many cases, even apparently severe, respond to patient and thorough medical treatment. The principles of treatment are, first, support the abdomen with a well-fitting binder or lifting corset. Second, strengthen the abdominal muscles by exercises. Third, regulate the diet, avoid foods which leave much material to be absorbed by the large intestine. Remember that the large intestine is the intestine of the herbivora. Buttermilk is of value. Fourth, regulate the bowels by flushing and by the ingestion of oils and petroleum products. Fifth, use judicious abdominal massage.

If intelligent and persistent medical treatment for two or three months fails, then surgical means must be considered.

*Surgical Treatment.*—In one of Mumford's cases the poor condition of his patient led him to establish an artificial anus as a preliminary to more radical work. In the case of E. E. I used cecostomy for the same purpose and it answered admirably. In a lady of about 50 years of age I have to admit a complete failure. She had suffered from constipation and obscure abdominal pains for many years, was extremely neurasthenic and was addicted to the abuse of many drugs. The anatomic condition was such as I have already described but to her extremely weakened condition she soon succumbed to septic parobitis.

In less severe cases ileosigmoidostomy is often of value. Experience has, however, shown that after temporary improvement the patient may relapse owing to an anteperistalsis throwing feces back into the excluded segments of colon. To obviate these dangers Lane has excised most of the colon above the site of the ileosigmoid anastomoses while de Quervain has endeavored to attain the same result by plicating the colon and by exaggerating the acuteness of the hepatic flexure. Wilms, Klose and others think intestinal stasis is due principally to undue mobility of the cecum and remedy this by cecopexy or by cecopexy plus cecoplication. Hofmeister does not believe that mobility of the cecum is of importance in causing stasis; he accuses, instead, dilatation of the cecum due to incomplete obstruction of the ascending colon. In recent and less grave cases he endeavors to render the dilated and mobile cecum more mobile by dividing with the cautery all parietocolic folds or adhesions which contract the intestine. In principle this is similar to Jackson's operation in which he strips off the spider-web membrane which covers the colon.

3. Western Surg. Assn., 1908.

4. Tr. Am. Med. Assn., 1909.



Jackson has had some gratifying and some disappointing results.

Treatment of ileopelvic bands has already been alluded to earlier in the paper.

#### CONCLUSIONS

1. Chronic intestinal stasis is exceedingly common; gives rise to diverse and obscure symptoms and is at least one cause of neurasthenia.

2. It may be due to various causes but the real etiology is yet unknown.

3. Failure to obtain relief from symptoms of appendicitis after appendectomy is often due to the fact that the appendicitis, if present at all, was merely an accident in the course of a case of chronic intestinal stasis.

4. In every operation for chronic appendicitis the surgeon ought to examine the whole cecum and the terminal segment of the ileum.

Argyle Building.

#### CIRCULATORY PHENOMENA IN THE EYE \*

W. H. LUEDDE, M.D.

ST. LOUIS

A consideration of the circulatory phenomena in the eye includes primarily those caused by the flow of the blood itself, pulsation, etc., and secondarily those caused by changes in the blood-vessels which may arrest or modify the flow, arteriosclerosis, traumatism, etc.

The diagnostician can usually determine the condition of the heart and larger blood-vessels by physical signs, to which he may add *x-ray* examinations. He can further determine the blood-pressure, the pulse-rate and its quality, and record it graphically by specially constructed apparatus. A general clinical survey added to his laboratory findings may give him the confidence of complete mastery of the case under observation. However, by the study of the phenomena of the peripheral circulation in the eyes he may often obtain definite information which he cannot afford to overlook.

The eye has three vascular systems — retinal, uveal and conjunctival. They are quite separate and distinct in their arrangement and special functions. From the standpoint of vision, primary importance belongs to the retinal blood-supply. It comprises the central retinal artery and vein, entering the optic nerve about two-thirds of an inch behind the globe and appearing on the optic disk usually as superior and inferior branches each, at once further dividing into temporal and nasal. Except for very slight anastomoses existing between branches of the ciliary and retinal vessels at the disk, they are terminal

vessels similar to those supplying the cerebral cortex. Since the invention of the ophthalmoscope by Helmholtz sixty years ago, the study of the circulatory phenomena in the retina in health and disease has been an exceedingly fascinating one. So thoroughly has this field been canvassed, and the results recorded and confirmed by one observer after another, that we can hardly expect any new facts to be added. However, the exact etiology of some well-known conditions is not cleared up and calls for continued close observation and study.

Without the aid of any instruments, one can, under favorable conditions of light and shadow, observe the movements of the blood-corpuscles in his own retinal capillaries. With the ophthalmoscope the corpuscular movements are not revealed, its magnifying power not being sufficient. But under certain conditions pulsations can be observed in the veins, arteries or capillaries.

The venous pulse is usually a physiologic manifestation seen at the disk in the larger veins as they bend into the funnel-shaped canal of the optic disk. If absent, it can be produced by pressure on the eye under examination. Donders early explained that it was due to increase of pressure within the eye by each arterial pulse wave, this causing compression of the veins. A general venous congestion with pulsating jugulars makes the venous pulse in the eye more marked. Also it appears more prominently in cases of aortic or tricuspid regurgitation.

Arterial pulsation in the retina is a pathologic phenomenon. Again the pulsation is most clearly visible at the optic disk where the artery emerges. It is synchronous with the systole and is caused by the presence of some resistance to the blood-stream on entering the eye. This resistance may be pressure (hypertension) within the eye, as in glaucoma; or be caused by optic neuritis or orbital tumors; or be due to arteriosclerosis; or to aortic insufficiency, as first observed by Quinke.

The capillary pulsation consists in the successive rhythmical pallor and reddening of the disk and is similar in etiology and appearance to capillary pulsation as observed in other tissues, as under finger nails.

It is beyond the scope of such a paper as this to present the technical points in the diagnosis of the various pathologic conditions which might be classified with circulatory disturbances in the retina. They are represented on these plates much better than they could be described verbally. (See footnote.)

These represent some of the more frequent examples of this type of cases, but by no means all of them, nor are they always so clearly differentiated.

Papillo-edema (or choked disk) is a well-known circulatory disturbance of great clinical significance.

\* Read in the Medical Section at the Fifty-Fourth Annual Meeting, Missouri State Medical Association, Kansas City, May, 1911.

Perhaps the most striking of all ophthalmoscopic pictures is that produced by embolism or thrombosis of the central retinal artery. The bleached-out retina, the slight movement still evident in detached columns of blood in some of the vessels of the retina if the case is seen early enough, the cherry-red spot in the macula, can never be forgotten after being once witnessed. A similar picture on a small scale may occur when the small branches of the artery are obstructed. Scarcely less more interesting and more frequent are hemorrhages in the retina, due to venous obstruction.

It may be difficult at times to distinguish retinal conditions caused by toxic substances in the blood leading to retinal inflammation and hemorrhages, as in diabetes and Bright's disease, from very similar appearances produced by mechanical obstruction to the venous circulation.

One clinical report here may suffice to illustrate:

Miss W., aged 20 years, consulted me two years ago on account of loss of sight in her right eye, said to be due to "kidney disease." This probable etiology had been stated to the patient after an ophthalmoscopic examination by an oculist in another city without waiting for the findings by a urinalysis. The ophthalmoscopic examination showed diffuse hemorrhagic areas and patches of exudate in the retina of the *right eye only*. The fundus of the left eye was entirely normal. Vision in the right eye was much reduced, the left eye normal. A urinalysis seemed to confirm the opinion previously expressed and showed a large percentage of sugar and trace of albumin.

However, the ocular trouble was entirely one-sided. She suffered from headache on the right side of the head and had for some time previous to the loss of vision. The ophthalmoscopic picture was not unlike what might accompany partial obstruction of the retinal vein or of several of its branches. Some of the cardinal general symptoms of genuine diabetes did not exist. An examination by a rhinologist to exclude disease in the accessory nasal sinuses was urged. The examination revealed a *severe sphenoidal suppuration* on the *right* side. Under therapeutic and operative treatment of the sphenoidal suppuration the retinal condition cleared up and sight in the right eye was restored to normal. The field of vision became as perfect as was that of the healthy eye. A year later the ophthalmoscopic picture showed barely a few small scars in the retina, so small that the field does not show the defect and they are entirely unnoticed by the patient. Coincident with this improvement in the eye the urinary findings became normal without change of diet or special consideration of that condition in the treatment.

The presence of sugar in the urine can be explained if we recall the intimate anatomic relation between the pituitary gland which rests on the sella turcica over the large sphenoidal cell. A suppurative process in the sphenoid might produce some pituitary disturbance and such disturbances have been known to be accompanied by the presence of sugar in the urine. The removal of this cause resulted in the cure of the glycosuria, as well as in the cessation of the secondary monocular venous obstruction.

Usually diabetic retinitis involves both eyes.

Momiji-Kako<sup>1</sup> reports from Uthoff's clinic at Breslau that nineteen out of forty-five cases of diabetic retinitis were *monocular*. It is interesting to speculate how many, if any, of these were comparable clinically to the case here noted. Rhinologic examinations were not made in any of them, or at least no findings are reported. This emphasizes that *all circulatory* phenomena in the retina should be judged not only from the ophthalmoscopic picture, but with the careful consideration of every clinical detail.

The most highly vascularized tissue in the eye is the uveal tract, the chorioid, ciliary body and iris. These tissues are supplied by the short and long posterior and the anterior ciliary vessels, the latter anastomosing with the conjunctival vessels at the corneal limbus. They have a slight anastomosis as before noted with the retinal vessels at the optic disk. Special features in the uveal circulation are: the vorticosæ veins of the chorioid, the venous plexus in the ciliary processes resembling erectile tissue, the arterial circles in the iris and the canal of Schlemm, a unique venous plexus at the junction of the cornea and sclera. They have highly important nutritive, secretory and absorptive functions, which are directly influenced by the general blood-pressure, arteriosclerosis, etc. The direct observation of the circulation in either chorioid or iris is prevented normally by the large amount of pigment in the cells and stroma of these tissues (albinos excepted).

The dreaded disease, glaucoma, with its obscure etiology, always calls for a comparative study of the general circulatory system. Both its operative and therapeutic treatment attempt to secure drainage from the globe usually at the irido-corneal angle (canal of Schlemm). But glaucoma can be caused by obstruction of the *venæ vorticosæ*. This is probably the pathogenesis of the increase in intra-ocular tension often encountered in chorioidal sarcoma. In a case<sup>2</sup> I reported five years ago, a thin chorioidal sarcoma (less than 1 mm. in thickness at any point) invading about three-fourths of the area of the chorioid and involving several *venæ vorticosæ* produced severe glaucoma for four or five months before enucleation. In this case it could not have been the mass of the tumor which produced the glaucoma. The sight was lost twelve months before symptoms of glaucoma were present, indicating that the tumor and not the glaucoma was the primary condition.

Histologic examination showed the lens and iris pressed against the cornea, and the ciliary body completely flattened by the pressure which accumulated in the eye after obstruction of the *venæ vorticosæ* by the sarcomatous mass (Fig. 1).

1. Momiji, Kako: Beitr. z. Kenntn. d. Augenaffekt. bei Diabetes mell. Klin. Monatsbl. f. Augenh., 1903; ref. in Encyclopédie Française d'Ophtalmologie, Tome 6, pp. 835, 838.

2. Luedde: Ueber Flächensarkom d. Auges., v. Graefes Arch. f. Ophth., 1906, Band lxxiii, Heft 3, S. 468-480.



This patient died seven weeks after exenteration of the orbit from unusually large metastatic growths in the liver, lungs, kidney, etc., showing in another way the well-known free vascular communication of the uveal tract with the general system.

The greatest similarity in the vascular supply of the eye to the general systemic type of circulation exists in the conjunctiva. The ocular conjunctiva loosely stretched over the white sclera is the most accessible and favorable membrane for study of certain circulatory phenomena. Ophthalmologists themselves are to blame that these have not been more generally observed. It was reported that at a conference of internists in one of our large cities some months ago to which ophthalmologists had been invited to discuss arteriosclerosis in the eye, it was an internist and not an ophthalmologist who reminded those present of that common sign of brittleness of the conjunctival vessels, the spontaneous subconjunctive

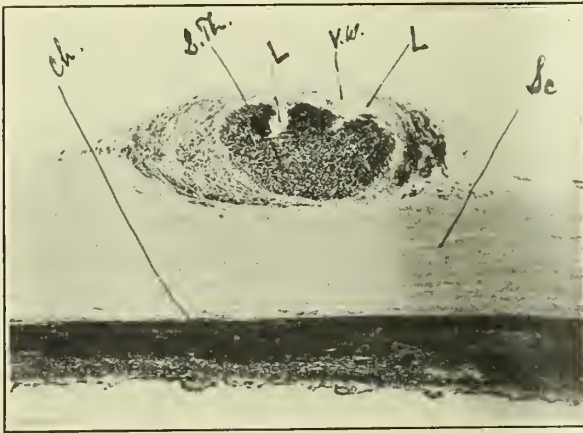


Fig. 1.—Microphotograph of sarcomatous thrombosis of vorticos vein, which has just passed through the sclera, in a case of flat sarcoma of the chorioid. Note that the thickness of the sarcomatous chorioid is less than that of the sclera at this point; it nowhere exceeded 0.6 mm. V. W.: Vessel wall vorticos vein. L.: Remaining lumen of vein. S. Th.: Sarcomatous thrombus. Ch.: Sarcomatous chorioid. Sc.: Sclera.

tival effusion of blood. The examination of the retina ophthalmoscopically has diverted our attention from the simpler manifestations at the threshold of this miniature camera obscura, the human eye.

Something of the general character of the conjunctival vessels can be determined by the aid of a good magnifying glass. So much more can be done with a proper instrument that I shall not discuss what might be done without it. The instrument of choice in this study unquestionably is the Zeiss-Capski binocular microscope, or so-called corneal microscope. With this instrument, as pointed out by Professor Schleich,<sup>3</sup> even the movements of the blood-corpuscles can be studied with ease. His was not the first observa-

tion of the circulation in the conjunctival vessels. Similar observations had been made by Coecius in 1852. Preiss, Friedenwald, Angstein, de Weeker, Liebreich and Bajardi also had recorded such studies previously, but their methods had been so cumbersome and difficult that their work had not been followed up and was almost forgotten. Schleich justified his report by the fact that the Zeiss binocular microscope greatly simplified the procedure and that it afforded greater magnifying power.

The objection which remained was the rather deficient power of illumination. This I believe I have corrected in a simple manner.<sup>4</sup> One advantage of the stronger illumination is that you have greater penetration for deeper vessels.

What purpose can be served by these observations beyond the general interest in physiologic facts? To determine the clinical significance I have examined a series of about 500 eyes in the last year. These examinations have shown the need for further study, not only of the eye but of the entire system in relation to the findings. In some instances this was done through the aid of the family physician, the internist or the neurologist. Some interesting facts have been elicited, but the records are too incomplete to warrant generalizations and conclusions.

In the first place, when looking at the conjunctival vessels with sufficient power to show corpuscular movements, every observer is impressed with the variety of movements there presented. The velocity of the current in every vessel varies from that in collateral and anastomosing vessels more or less. Schleich fixed the variability in the capillaries from 0.50 to 0.85 mm. per second. His highest figure may be correct, but his lowest is not. One can scarcely trace the movement of the corpuscles accurately when they move faster than 0.75 to 0.80 mm. per second under the microscope. But I have timed the corpuscles with an accurate stop-watch and found them to rest stationary except for some little jar, which, however, did not dislodge them for 3 or 4 seconds at a time, and then often they would move at a rate not greater than 0.10 to 0.15 mm. per second until they reached some anastomosing vessel or were lost from view in the deeper loops under the tissue. I would therefore state the capillary rate from 0 to 1 mm. per second with the average between 0.45 and 0.60 mm. per second. These variations occur under conditions otherwise entirely normal and occur in the majority of cases examined. They may therefore be considered physiologic.

The same may be said of another phenomenon striking to the first observer. I refer to the fact,

3. Schleich: Sichtbare Blutströmung in den oberflächlichen Gefässen der Augapfelbindehaut, *Klin. Monatsbl. f. Augenheilk.*, Marz, 1902, S. 177.

4. Luedde: Improved Illumination for the Zeiss Binocular Corneal Microscope, Used in the Study of the Episcleral Vessels and Their Circulation, *Arch. f. Ophth.*, 1911, xl, No. 4, pp. 373-377.

also noted by Schleich, Stargardt<sup>5</sup> and others that the vascular system is not full of the blood elements all the time, or perhaps at any time, over the entire body. While watching the white field of the apparently bloodless sclera between the branches of larger vessels, one will see an occasional column of blood, sometimes made up of only one-half dozen red corpuscles, again of a larger number, pass along a capillary and disappear without a trace, and after waiting a few seconds or longer this is repeated. If the examination is prolonged or there is some irritation, the interval is shortened; the flow may even become continuous. Ordinarily this occurs only in the smaller capillaries—those through which the corpuscles pass in single or double file, having a diameter of 10 to 12 microns. But after a drop of adrenalin solution in the conjunctival sac, one may see a similar occurrence in a vessel which normally has a caliber three or four times as great. In the larger vessels with a strong, steady flow, adrenalin does not seem to retard or accelerate the flow, but the volume passing is lessened. I would not state this as a definite conclusion as my experiments with adrenalin have been only recent and few in number, and I know of no other report along this line. Obviously such experimentation, the dropping of such simple non-irritant solutions into the eye, is not difficult or even disagreeable for the individual who submits to the test, and may throw some light on questions not quite clear in the physiology and pathology of the circulation.

Almost the opposite to the macroscopic effect of adrenalin on the conjunctival tissue is that of dionin. So far my results with it have been uncertain. I have examined after its use only in cases where it had been applied for therapeutic purposes, and some of these patients could not be examined for more than a few seconds without discomfort. It seems to increase the amount of blood actually present in the tissues along with the well-known lymphedema.

In the great majority of cases the flow of blood with all its stops and hindrances is in the same general direction in a given vessel and its collaterals, but there are cases in which there is regurgitant flow which is entirely independent, it seems, of the pulse-rate.

This condition first impressed me in a married woman about 40 years old, who wanted glasses for her near work. She asked me to look at her eyes with reference to the presence of kidney disease as she had noticed that her limbs were swollen just over the shoe tops, at the close of the day. The ophthalmoscope revealed nothing abnormal, but a routine examination of the conjunctival vessels showed that in her case the flow of blood did not always remain the same. It would regur-

gitate so long sometimes that it was difficult to tell in which direction it flowed normally in certain vessels. I apprised her physician of my findings, and he made a thorough examination of her heart and kidneys, but found nothing abnormal. Repeated examination showed the same condition. There was evidently in this case normal central heart action but poor peripheral control. We might refer to it as imperfect peripheral compensation—a vasomotor phenomenon. I have observed about a dozen such cases among people of different ages and conditions. I will not tire you with the details, but mention a few of them as briefly as possible.

One was a young man of 23, examined after fainting in my office. Another was a hysterical woman of 50, examined after a spell of vomiting induced by reflection of light into her eyes from the ophthalmoscope. With these the condition was probably temporary. In the first case it seemed to be constant. It was likewise constant in a man of 50, who had been at the head of a large educational institution and had suffered a "breakdown" from which he failed to rally.

One case where I expected to find regurgitation and failed was that of a woman of 40, who had a variety of cardiac murmurs but a rhythmic pulse. She was feeling well and was carefully following the regulations and treatment directed by a capable physician.

There is good reason to believe that this condition is not merely local in the conjunctiva. Adrenalin, for instance, did not seem to modify it when dropped into the conjunctival sac.

Several experiences led me to suspect that this condition may be present in normal individuals when they are very tired, due to an exhausted vasomotor control.

A single experience suggested that such regurgitation may be normally present in the smaller peripheral vessels during the drowsiness that precedes sleep, and perhaps this is the manner in which the activity of the cerebral circulation is reduced, permitting sleep to occur. Observations of the same individual at various times for several days are needed to clear up this point.

It would be interesting also to note what observations made at stated intervals after the ingestion of certain drugs would show in the peripheral circulation. I have not had the time to follow up this line of study. So far as I know it has not been done by any one, with the conjunctival circulation as an index.

One use for this method for the observation of the flow of blood I have not mentioned. It may be of medicolegal importance. No doubt it would be one means of confirming the total cessation of all movement of the blood-stream in case the question of "suspended animation" or actual death needed to be decided.

It goes without saying that any method which enables us to see the movements of these cor-

5. Stargardt: Ueber Pseudotuberculose und gutartige Tuberculosedes Auges, mit besonderer Berücksichtigung der binocular mikroskopischen Untersuchungsmethode, v. Graefes Arch. f. Ophth., Band IV. S. 469-506.



puseles also permits us to detect the first changes in the caliber of the smallest vessels. That is where the most widely spread of all diseases begins. I refer to arteriosclerosis (Fig. 2).

Professor Rohmer,<sup>6</sup> in addressing the National French Society of Ophthalmology in a classical paper on arteriosclerosis of the eye, after referring to its causes (various diatheses, intoxications and infections), says: "In sum total, arteriosclerosis is nothing but the *natural end* of the *evolution of our arterial system*, and no matter how sheltered we may have been from all baneful influences, it will come to us sooner or later, if Providence extends our existence."

The early recognition of this condition may be helpful by enabling us to correct or avoid harmful influences. We are enabled by this instrument to see miliary aneurysms long before they break down. It does not follow that if its initial stages



Fig. 2.—Sketch from conjunctiva of woman 35 years old showing aneurysmal dilatations. Clinical history indicated syphilis. (Wassermann negative once; not repeated.) Smallest capillaries visible about 10 microns, 9 in diameter. a. Corneal limbus showing iris.

are present in the retina or conjunctiva it must be equally advanced in all parts of the body. They may be even more advanced elsewhere than in the conjunctiva. However, I have yet to see the case where arteriosclerosis was pronounced in the ocular tissues that there were no signs of it whatever in other organs. Of general interest in this connection was a series of cases examined with Dr. W. W. Graves.<sup>7</sup>

Some of these problems are of lively interest to every physician. It is to be hoped that many observations by different investigators will clear up existing doubts and contribute to the growing clinical importance of the examinations of the ocular circulatory phenomena.

6. Rohmer: Arteriosclerose, Bulletines et Memoires de la Société Française d'Ophthalmologie, 1906.

7. Graves: The Scaphoid Scapula a Frequent Anomaly in Development of Hereditary, Clinical and Anatomical Significance, Med. Rec., May 21, 1910; etc.

## ILLUSTRATIONS USED IN READING THE PAPER

The illustrations used were taken from Axenfeld, "Lehrbuch der Augenheilkunde," second edition; from Haab, "Handbook on Ophthalmology"; from the "Bericht über die 36te Versammlung der Ophthlm. Gesellschaft"; and the Bulletines et Memoires de la Société Française d'Ophthalmologie, 1906. It is out of question to reproduce them here therefore a list of subjects with short notes is furnished.

No. 1.—Normal fundus oculi showing (a) disc and vessels (b) macula and fovea centralis.

No. 2.—(a) Embolus (or thrombosis) of the central retinal artery (sketched ten days after attack). Disc margins indistinct. Cherry spot at the macula. Blood stream in the arteries not broken as in the earliest stages. (b) Thrombosis of upper temporal branch of retinal vein. Hemorrhagic areas varying in size and density, also patches of retinal degeneration.

No. 3.—Thrombus or embolus of the superior temporal artery, some time after occurrence. The vessel shows almost normal caliber. Some cloudy swelling produced by the obstruction remains.

No. 4.—Severe optic neuritis and edema (papilloedema) from an orbital tumor. Retinal hemorrhages from venous engorgement.

No. 5.—(a) Optic neuritis in chronic meningitis. Edema of the nerve fibers. Obliteration of the disc margin and tortuosity of the veins. (b) Albuminuric retinitis. Probably due to toxins though closely related to circulatory disturbances.

No. 6.—Angiopathia traumatica retinae. Purtscher at Heidelberg, 1910. A rare condition following severe cranial traumatism.

No. 7.—Hemorrhagic retinitis in pregnancy, monocular. Albumin fever found in urine in spite of the stellate figure. Spontaneous recovery within three weeks after delivery at full term. No trace of hemorrhage nor degenerated areas remaining. Normal vision being regained. Probably due to an incomplete obstruction in the central retinal vein.

No. 8.—(a) Retinal changes in arteriosclerosis. Degenerative changes in the form known as retinitis circinata. Few small hemorrhages. (a) Diabetic retinitis. Numerous hemorrhagic and irregular whitish patches of fatty degeneration.

No. 9.—(a) Endarteritis and periarteritis in a retinal artery. (b) Albuminuric retinitis with stellate figure in the macula.

No. 10.—Optic atrophy probably due to arteriosclerosis of the central retinal artery. Hirschberg.

No. 11.—Vorticose vein in the chorioid in an Albino.

No. 12.—Arteriosclerosis of chorioidal vessels.

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## SCHAFFER'S VACCINE TREATMENT OF RHEUMATISM\*

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In the following paper I report the clinical results which I have observed in the use of Schafer's rheumatism vaccine on a series of twenty non-selected rheumatic patients in the St. Louis City Hospital.

First, however, I would describe briefly Dr. Schafer's theory, also the nature, production and use of the vaccine. Dr. Schafer emphasizes three points as the basis of his vaccine treatment:

\* Read by title at the Fifty-Fifth annual meeting of the Missouri State Medical Association, Sedalia, May 23, 1912.

1. Practically all acute and many of the chronic diseases are caused by the metabolic products of bacteria.

2. The human subject is the host of micro-organisms which are pathologically latent, but capable of setting up disease under certain conditions.

3. The growth of infecting organisms can be arrested and their effects neutralized by products derived from their development in artificial mediums.

Relative to these points Dr. Schafer believes that, except in rare instances, infections are mixed infections; that while one species may predominate, the pathogenic processes induced by it are intensified by the presence of other organisms, and that in the course of infection the symptoms are not due only to the effects of a single species of organisms, but to the influence of other organisms which also must be considered in treatment.

He believes that a great variety of otherwise latent, and for the time being harmless, organisms may become active as a result of the invasion of the tissues in any way by a specific organism, and that certain diseases as rheumatism, tuberculosis, pneumonia, typhoid, erysipelas, etc., have the specific and dominant organism associated with several other species of organisms, any of which may help to produce the symptom-complex in a given case; thus accounting for the fact that the use of a single specific vaccine, or even autovaccine is frequently inadequate.

The word phylacogen means the production of a guard; in other words, the introduction of a phylacogen into the system causes the tissues to produce a guard against the invading organisms. Phylacogens are neither serums nor true vaccines since serum is not the base, nor are bacteria a content of the fluid.

It may be briefly explained that they are prepared by growing separately definite numbers of definite species of infectious organisms, in definite amounts of broth, at a definite temperature (37 C.) for a definite period of time (seventy-two hours). Thus in a measure he endeavors to standardize the phylacogens.

The more common infectious organisms are used, as the several staphylococci, *Streptococcus pyogenes*, *Bacillus pyocyaneus*, *Diplococcus pneumoniae*, *B. typhosus*, *B. coli communis*, *Streptococcus rheumaticus*, *Streptococcus erysipelatis*, etc., obtained from various sources. The cultures are killed, mixed with distilled water and 0.5 per cent. phenol added as a preservative, then filtered through porcelain; thus the phylacogens are sterile aqueous solutions of the metabolic products of bacteria grown in artificial medium (broth).

The basic phylacogens, or, as they are called, mixed infection phylacogens, consist of equal

amounts of a variety of the singly grown phylacogens. A specific phylacogen consists of equal amounts of mixed infection phylacogen and the phylacogen of the predominant organism of the disease (for rheumatism the Payne and Poynton organisms) is used.

The phylacogens are tested as to their sterility and toxicity by cultural and animal experiments, similar to the serums; likewise resembling these in the period of potency, namely, one year.

The phylacogens may be administered subcutaneously or intravenously using the usual aseptic precautions. About one minute for each cubic centimeter should be occupied for introducing it by the intravenous method. The initial dose by the subcutaneous method is 5 c.c., and the second or third dose increased to 10 c.c., continuing this dose until a total of six or more injections have been given.

Using it by the intravenous method the initial dose is 0.5 c.c. to 1 c.c., increasing the dose 1 c.c. each day to 5 c.c., until six or more doses have been given.

I have not used at one time more than 5 c.c. intravenously or 10 c.c. subcutaneously. I have usually given it daily in increasing doses as stated, unless the intensity of the reaction or the condition of the patient for any reason caused me to omit the dose for a day or two, or to give the same or even a smaller dose. For subcutaneous injections the abdomen or flank seems least objectionable to the patient; other sites, however, may be chosen. For intravenous injections the veins of the flexor surface of the arm near the elbow are most accessible and easily controlled. When given subcutaneously there is considerable local reaction resembling somewhat, but of greater intensity than, that following the use of the antitoxins; when given intravenously, however, there is no local reaction unless the vein is missed and a little given outside of the vein.

The constitutional reaction may be light or quite marked, consisting of a chill, even a severe rigor, followed by considerable temperature which gradually subsides; the marked reaction resembles very closely a moderately severe tertian malarial paroxysm. It is sometimes accompanied by vomiting and abdominal pain and may be followed by herpes labialis; occasionally numbness and some weakness is felt for a few days after. Following the reaction the patient usually feels at once more or less relieved of the rheumatic symptoms. The pain, swelling and redness usually disappear rapidly, often to a marked degree after the first dose and in most acute cases entirely after five or six doses. Following the intravenous dose the reaction, as evidenced by a chill, occurs in ten minutes to a half hour, and after the subcutaneous dose it may be an hour or more in developing. The reaction following the intravenous method may be more intense than by the subcutaneous method and that following either



method subsides in a few hours, the temperature often going down to normal or subnormal.

In the treatment of this series of twenty cases with phylacogen I have used no other rheumatic medication whatever, the only other medicine being a dose of magnesium sulphate as might be necessary to insure daily action of the bowels. The diet consisted of the usual diet for rheumatism.

The following case histories are typical of the cases as they occurred varying in degree from mild to severe types. A few had organic heart disease from former attacks, one case of multiple atrophic arthritis of many years' standing, one case of arthritis deformans. Some of the cases showed acute or chronic tonsillitis associated with rheumatic symptoms. A number of cases had had former attacks and a few were recently recurrent cases which had not done well on full doses of the salicylates.

CASE 1.—A. C. Male, laborer, single, age 38, colored, family history negative. Had syphilis and gonorrhea. Chest examination showed a marked mitral lesion, regurgitant and fairly well compensated, which he said had existed for some years. The present attack of rheumatism began seven weeks ago, for which he had been treated with full doses of salicylates, as constantly as his stomach would tolerate, with only partial relief. No salicylate, however, had been given for the three days before the phylacogen was begun. At the time of the first injection many of his joints showed typical evidence of severe rheumatism; ankles, knees, elbows and wrists were very swollen and painful, temperature 102 to 103 F. He was unable to feed himself. The first dose of four c.c., which was rather large for an initial intravenous dose, was followed by a severe rigor and a temperature of 105.4 F., which receded in a few hours with marked decrease in symptoms. The following day he was able to feed himself and after the third injection complained of no pain; after the sixth injection he was up and about the ward for a few days until dismissed from the hospital without rheumatic symptoms. Very extensive herpes labialis followed the early injections.

CASE 2.—G. D. Male, widower, age 53, white, not able to work. Family history negative except that the father suffered with rheumatism and an uncle had arthritis deformans. Had usual diseases of childhood and as a boy had recurrent attacks of rheumatism, often lasting for months. Physical examination showed a corneal ulcer which had existed for three months; no heart symptoms; abdomen negative; reflexes irregular, due no doubt to marked atrophy of the muscles. For 20 years he has had a developing arthritis deformans, showing now considerable fixation of the elbows and knees, and claw-shaped hands, with more or less constant pain in different joints, being entirely unable to work for three years. Has an irregular temperature ranging from normal to 100 F. Patient received a series of five injections during a week, with progressive improvement following each injection. He now states that he is more free from pain than he has been for several years for such a period of time, and can move with greater ease the joints which are not fixed. Patient is still under treatment. He developed quite marked herpes labialis following early injection.

CASE 3.—W. E., male, married, age 28, white, machinist. Family history negative. At 11 years of age had an attack of rheumatism which lasted three weeks, again at 15 which lasted five weeks, at 19 an attack lasting a year, at 21 another attack lasting seven months, and at 24 was again incapacitated for

another year with his fifth attack. No history of any venereal disease. Married at 25 and has two healthy children. Present attack began about two weeks before he came to the hospital with the usual symptoms of redness, swelling and pain in the joints, also pain in back of neck, temperature 100 to 102 F. Had taken medicine without relief until the time of admission to hospital. Physical findings were negative except for slight systolic murmur at apex. He received five c.c. initial dose subcutaneously, producing a rigor accompanied by vomiting, temperature of 105.6 F., followed by considerable relief. Three other subcutaneous doses as high as ten c.c. were given with considerable relief, then he received intravenous injections with more marked relief, and after five of these was apparently well and was discharged.

CASE 4.—J. L., male, single, aged 22, white, laborer. Family history negative. Had two attacks of rheumatism seven years ago in ankles but not confined to bed at these times. Tonsils somewhat swollen and sensitive. No definite heart findings. Hands and feet swollen, red and tender. Patient suffered a great deal of pain and required opiates; temperature 100 to 102 F. Received a dose of phylacogen subcutaneously with a reaction of 103.8 F., much improved. Later on he received five doses intravenously and left the hospital apparently well.

CASE 5.—L. C., male, widower, age 38, white, agent. Family history negative. Gonorrhea five years ago, no lues, no heart lesion detected. Has had some pain in the shoulders occasionally since a typhoid attack seventeen years ago, and at various times pains in other joints so as to incapacitate him at various times, although not in bed with other attacks. Wrists and hands showed typical symptoms; temperature 100 to 101 F. Received several injections intravenously, after the first two doses of two and one c.c. respectively, with a 103 to 104 F. temperature reaction, he developed some temporary dyspnea early during the reaction; subsequent injections of more than 2 c.c. with moderate reactions resulted in complete relief of all symptoms, and none of the reactions after the first two was accompanied by disturbance of breathing. Herpes followed the early injections. Patient discharged several days after treatment well.

CASE 6.—C. C., male, single, 26, white, laborer. Family history negative. Rheumatism three years ago, had three attacks in the past year, always occurring with tonsillitis. Gonorrhea three years ago, denies lues. Physical examination shows pharynx injected and tonsils enlarged, no heart findings. Swelling and tenderness in shoulders, elbows, hands, knees and feet, complains of suffering considerable pain. Temperature 99 to 101. Received phylacogen intravenously, seven doses, respectively one-half, one, two, three, four, five, and five c.c. each; much relieved after first doses and left the hospital well. Herpes followed early injections.

CASE 7.—C. C., female, single, family history negative except that an aunt died of rheumatism. Symptoms of rheumatism developed seventeen years ago, swelling and pain in left little finger for two years extending to the middle finger and thumb and to the wrist later, the right hand was involved with extension of the wrist; this gradual progression continued until three years ago when the left knee became acutely involved and a year later the right knee and both ankles were gradually involved. During the past year patient was not without pain, she states, at any time. Complained of great deal of pain along the course of sciatic nerve, and of much pain when moving the joints; the fingers were spindle shaped and she was unable to feed or care for herself when she came to the hospital. Patient was somewhat anemic but no definite findings of moment apart from the rheumatism were found, temperature ranging from normal to 101 F. before treatment. She received seven doses of phylacogen intra-

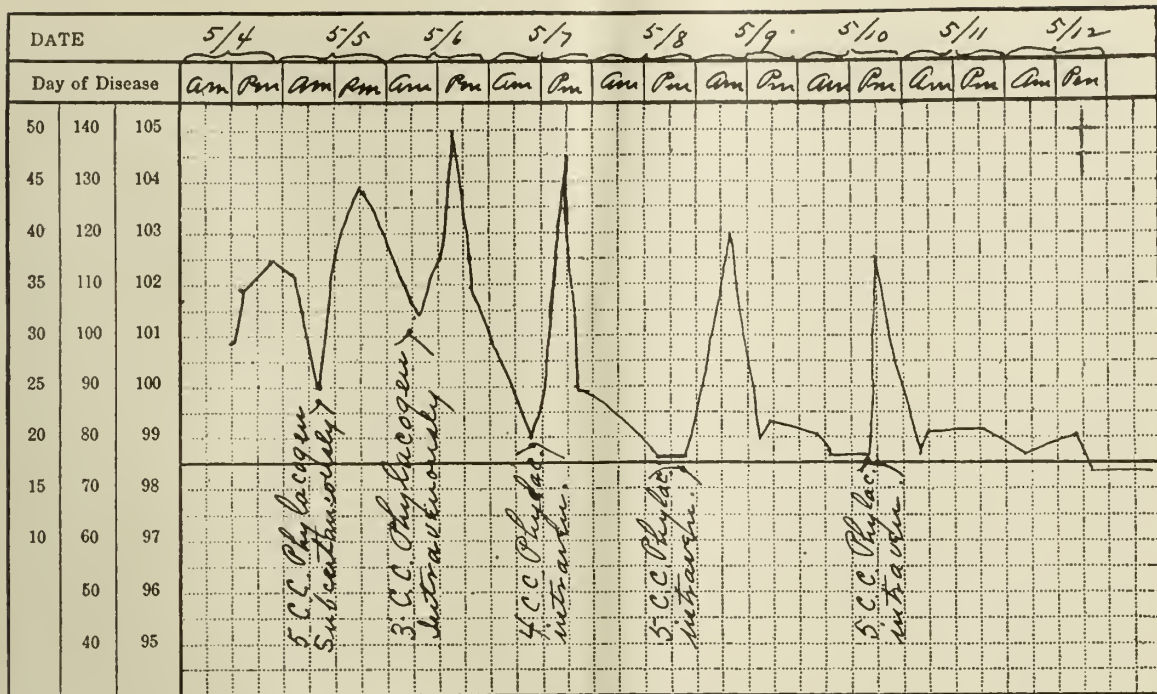


Chart 1.

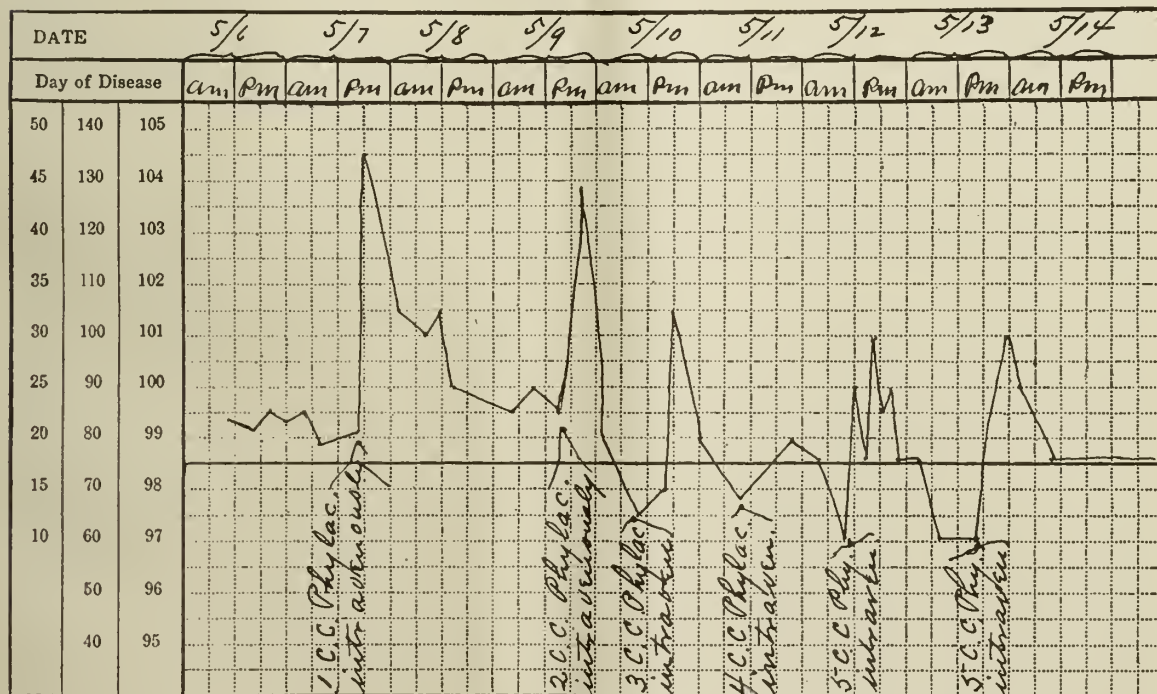


Chart 2.

The accompanying charts illustrate the types of temperature reaction. Chart No. 1 shows the first subcutaneous injection, followed by a gradual rise and gradual fall of temperature, while the second injection, intravenous, shows a quite rapid rise and fall of the temperature. Chart No. 2 shows the subnormal temperature which frequently follows a reaction.

In this connection I will recall the points bearing on the injections. Reactions vary with the size of the dose, 5 c.c. being the initial subcutaneous dose for adults and one-half c.c. the initial intravenous dose for adults. The respective doses should be governed by the size of the individual and his general condition. Old age, arteriosclerosis, myocarditis, marked nephritis and any condition in which the reaction symptoms, especially the chill and temperature, might be injurious to the patient, should be treated cautiously, if at all, with phylacogen.

If there is any question as to the remedy being suitable for an individual case, it should be tried subcutaneously before using it intravenously. It is important that all patients remain in bed while receiving the injection and during the reaction, and it is best given when there is little or no food in the stomach. I have not used it on very young or old patients, but it is recommended that such patients receive one-fourth to one-half the usual adult dose as given for the respective methods of administration.

The pulse and respiration, not shown on the charts, usually change in keeping with the temperature, except that occasionally some temporary dyspnea occurs during reaction.



venously, beginning with two c.c.\* There was much relief after the first dose and within a few days she was able to feed and care for herself. There was complete disappearance of pain and the joints of the hands and fingers particularly showed marked decrease in size and increase in motility. In this case of chronic atrophic arthritis the x-ray showed no marked destructive changes of the joint surfaces. Herpes followed early injections. After a few days she felt a little return of pain in one ankle and one wrist, and will receive another series of intravenous injections, with occasional doses thereafter for a time.

CASE 8.—L. O., male, single, aged 22, white, laborer. Family history negative; rheumatism at 14 with involvement of knees and ankles. Complete recovery after three months. Has had sore throat occasionally. Gives history of gonorrhea and chancre in July, 1911. Has received deep injections of mercury. Pharynx injected, cervical glands palpable, heart very rapid and irregular, mitral regurgitant murmur, left heart large, had some precordial pain at times previous to last attack of rheumatism. Shoulders painful, knees and ankles red, swollen and tender; temperature 99 to 102; suffered with considerable joint pain before injections. He received phylacogen by the intravenous method, 7 doses, with quite marked reactions. Complete disappearance of rheumatic symptoms. Heart remained rapid and he felt the precordial pain occasionally as before. When discharged was free from active rheumatic symptoms.

CASE 9.—F. B., male, single, aged 55, white, cooper. Family history negative; children's diseases with a nephritis complicating scarlet fever which has recurred at times; some albumin and a few casts found. Rheumatism 15 years ago, at which time numerous joints were involved, lasting five weeks; another attack seven years ago lasting three months. Gonorrhea at twelve and three years ago; chancre a few months ago. Had sore throat three weeks ago, followed by the present attack of rheumatism. Left hand, knees and ankles swollen and tender; temperature 99 to 101. Treatment was administered by the intravenous method all symptoms disappearing after five injections. Early injection followed by herpes. Patient was discharged well.

CASE 10.—H. McM., male, single, aged 39, white, laborer. Family history negative. Has had syphilis, and several previous attacks of rheumatism. Physical examination negative. Large well nourished man. The present attack of rheumatism began a few days ago, his ankles, knees and wrists were swollen and painful. The left wrist was so much involved that he was unable to use it. Temperature 101 to 102. No treatment has been given. Five c.c. phylacogen subcutaneously was given, followed by marked chill, fever of 104, and a profuse sweat. After the reaction he was much relieved of the pain and received seven more ten c.c. injections subcutaneously which cleared up his symptoms except a little pain in the insteps which he said he had had independently of the rheumatism and which was apparently due to flat foot, as the arches were somewhat broken down. Following the injections he noticed a numbness of his limbs which lasted for a week or more. After an elapse of ten days without treatment there were no further joint symptoms. Patient discharged well.

My experience with phylacogen, or Schafer's vaccine, indicates that it rapidly relieves many rheumatic conditions, especially in the acute and subacute types, and in some of the chronic types which show little or no destruction of joint surfaces; also valuable in relieving pain and making more comfortable the more severe types of arthritis, even arthritis deformans. From

my observations it is still too early to draw conclusions as to the permanency of the results. Schafer, however, affirms the complete and protracted relief of most cases if the remedy is given thoroughly, especially with the acute and recurrent types. In none of my cases did I observe any heart lesions developing incident to the immediate attack, and the few which showed heart lesions from rheumatism or other causes were not disturbed by the treatment. With uncompensated lesions, however, it may be necessary to withhold the treatment for a time or give it very carefully. Two patients showed some temporary dyspnea, during the early part of the reaction, due possibly to too large an initial dose, too rapid administration or an idiosyncrasy for the remedy. This symptom with one patient followed his first two injections but not in the subsequent injections which gave him complete relief from the rheumatic symptoms; and with the other so slight as to be of little moment. Examination of the urine showed no disturbance, except in one case which had marked acute nephritis, and the increase of the kidney disturbance in this case was no more than might have occurred from the high temperature. His rheumatic symptoms were completely relieved after two doses, and after a rest of a few days, with attention to the kidneys, more was given to still further protect his heart and kidneys from rheumatic irritation.

No delirium has been observed with the high temperatures which have sometimes reached 105 and in one case 106.8, usually being higher after the first injection than after subsequent ones, even though the dose is gradually increased. The early reactions appear to be an index to the degree and rapidity of recovery, a good reaction being favorable. Herpes labialis was observed in several cases. Patients receiving the subcutaneous injections complained more of the treatment than those who received the intravenous injections which I believe is due to the local reactions. It appears advisable to tell the patient when beginning injections that they may have a chill and fever following injections, otherwise the reaction may be somewhat disturbing to them. For the comfort of the patient hot blankets were used during the chilling stage, and ice bag with cold water to drink during the hot stage. All injections, subcutaneous and intravenous, were given with the patients in bed where they were kept until the reactions subsided. As the joints improved the patients were allowed to be up some of the time between the injections. As a rule I believe the patients stood the reactions as well as they would stand equally severe malarial paroxysms. I am endeavoring to keep track of recovered patients to ascertain the possibility of recurrences.

I have not observed any special contra-indication to the use of the remedy, and we are assured

that no anaphylaxis has ever occurred in animal experiments with the remedy. Other than some dyspnea in two cases and a temporary aggravation of a nephritis in another case, apparently due to the high temperature of the reaction, all of which cases recovered rapidly, no untoward effects were observed. I believe it is important to give sufficient doses to prevent relapse. I observed, after two or three doses, in a few cases, apparent cure, with, however, some tendency to soreness of joints if injections were suspended for two or three days; and later continuing injections to a total of five to seven, or until the reactions were slight or ceased, no further trouble appeared for several days until the patients were discharged.

The few cases which showed active tonsillitis in conjunction with rheumatism were promptly relieved of the throat symptoms.

In conclusion I may say that Schafer's vaccine, or phylacogen for rheumatism, appears from my experience so far to be of definite value. It cures so promptly most acute and subacute cases that I think it will safeguard the heart from the unpleasant acute and chronic complications; it relieves many of the severe chronic rheumatic affections and may cure the less destructive chronic conditions.

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## THE CAUSES AND PREVENTION OF INSANITY \*

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KANSAS CITY, MO.

It is a difficult matter to give a clear and concise definition of insanity. The definition given by Maudsley I consider one of the best: "By insanity of mind is meant such derangement of the leading functions of thought, feeling and will, together or separately, as disable the person from thinking the thoughts, feeling the feelings, and doing the duties of the social body in, for and by which he lives." Conduct or behavior in relationship to society is the gauge.

It is not all insanity which requires outside control. Unsoundness of mind may arise from slighter defect of the nervous system which interferes in a minor degree with the reaction of the patient to his circumstances, but which need not affect his social life in any important way or degree. The legal test of insanity is found in conduct; mere disorder of mental processes has little weight as a legal test. The insane out of harmony with their social surroundings are not necessarily in opposition to them; the criminal, on the other hand, is in direct, voluntary antagonism to the laws of social life. Another important distinction between insanity and crime is

that the criminal is supposed to be conscious of the nature and quality of his acts; to know that they are injurious or noxious and worthy of punishment; and to be able to control them. An insane person may cause the same injury to society as the criminal, but, seeing that he is not able to control his act or is impelled by some false idea for which he is not responsible, or is ignorant of the nature and quality of his act and its consequences to himself and others, he is not punished.

Insanity and criminality may approach each other, but it must not be assumed that all insanity is allied to crime. We should recognize, however, that, primarily, insanity, crime and all other forms of defectiveness are dependent on anomalies and abnormalities of the brain for their development. We should ever bear in mind that all defectiveness has a physical basis, and also that defectives should be treated according to this knowledge. Insanity is not a disease, but is rather a condition resulting from a disordered brain function, the disordered brain function being dependent on the physical anomalies or abnormalities of the brain as mentioned above. Recognizing the fact that there is a condition which we call insanity that unfits those affected for a proper and normal reaction to the society to which by birth and education they belong, it is pertinent that we ask the question why we as members of organized society should be interested in the subject if insanity has not touched us personally. In answer to that query I shall presume to suggest that we have all been touched to a variable degree by this thing which we call insanity, if not as individuals, then through members of our families or through our friends, or both.

The history of insanity is contemporaneous with the history of man and society, organized and unorganized, has of necessity been concerned about the care and treatment of the insane. The members of society have been forced to provide measures for the protection of the sane from the annoyance and vicious tendencies of the insane. As man has become more civilized, educated and prosperous, the sensibility both of the individual and community has been intensified to the painful spectacle of insanity, and the sane have become more fearful of the vicious tendencies of the insane. This increased sensibility has stimulated society to provide more general care for the insane. A knowledge of the nature of insanity and the hospital idea in the care and treatment of the insane are both of fairly recent development. As late as the early years of the nineteenth century it was generally believed that insanity was a sort of monstrosity which could not be controlled by other than moral means. The management of the insane was monopolized by the monks and friars who could not be made to believe that the insane patient was an innocent

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sufferer from disease; they were rather of the opinion that the insane person should be held accountable for his peculiar ideas and conduct. The only care given the unfortunate sufferers was custodial care in vile dungeons and filthy jails. The first hospitals for the detention of the insane were but prison annexes. For many years the only care given the insane, in the so-called lunatic asylums, was custodial care. Quite recently there has been general recognition given to the idea that the insane person is sick and in the majority of instances can be restored to normal health by appropriate treatment in a properly constructed and equipped hospital. In the light of this knowledge we have rechristened our lunatic asylums and now call them hospitals for the insane. In order to make the institutions harmonize with the new name, we have developed to a variable degree the hospital features, and in doing so we have made them more attractive and eliminated some of the features which formerly terrified patients and relatives and kept many away from the institutions who were in need of hospital care and treatment. For the several reasons as outlined above, a much larger percentage of our insane population is now seeking care and treatment in our state hospitals for the insane.

Because of the several reasons to which I shall hereinafter refer, insanity is increasing more rapidly than is the population. In order that we may keep apace with the increasing demands of the insane for state care we have found and shall continue to find it necessary to increase the capacity of the hospitals already built, and to build other hospitals. Missouri has built four state hospitals for the insane, located at Fulton, St. Joseph, Nevada and Farmington. In addition to these there is at Marshall a hospital for the feeble minded and epileptics, conditions closely allied to insanity. The cost of building and equipping these various institutions has been no less than \$3,500,000. Large sums of money are appropriated out of the general funds of the state for the annual maintenance of the hospitals and for improvements. In these various institutions there are approximately 5,000 patients being cared for continuously at an annual cost of about \$1,125,000. Estimating the average earning capacity of each of these patients, if well, at \$200 per year, it will be an easy matter to figure that the insanity of these 5,000 persons is costing the commonwealth of Missouri no less than \$2,000,000 annually. The city of St. Louis is caring for more than 2,000 insane persons at a still greater per capita cost. There are approximately 3,000 other insane persons being cared for in county houses, private hospitals and sanitariums in the state. In addition to those being cared for in hospitals, etc., there are from 3,000 to 5,000 other insane being cared for by their relatives and friends in their homes. This would

give us more than 12,000 persons in this state who can properly be classed as being insane. Estimating the annual cost per capita at \$200 and the average earning capacity at an equal amount, if these patients were well, and we can easily figure up a total annual loss to the state of no less than \$5,000,000, because of the insanity of this considerable number of the citizens. With these figures before you, I do not need to suggest to you that the question of insanity is more than a social question, it is more than a medical question, it is more than a legal question; it is also an economic question of such magnitude as to demand the thoughtful interest of every citizen of this great commonwealth.

In addition to this number of actually insane persons, because of conditions to which I shall subsequently refer, one out of every 100 persons in the state has an unstable nervous organization which more or less strongly predisposes such persons to insanity and because of certain other conditions to which I shall also refer, many of these predisposed persons will become insane and keep our hospitals filled to overflowing. Many of these predisposed persons are semi-insane and must be supported wholly or in part by their relatives and friends, which is another factor contributing to the total cost to the community of insanity and allied conditions. With a population of 3,500,000, the number of predisposed persons would be 35,000. Many of these neurotic and semi-insane persons are now being cared for by the state as criminals. Recent investigations have demonstrated that all habitual criminals have anomalies and abnormalities of the brain neither different in kind nor degree from those manifested by many of the insane. In the light of these demonstrations we must admit that practically all, excepting the accidental criminals, have either inherited or acquired physical defectiveness which fully justifies us in classing them as mentally defective. Admitting that our state has an insane problem of the magnitude as the above-mentioned facts would indicate, I am of the opinion that we as citizens of the state are fully justified, and should consider it our duty, to interest ourselves actively in the solution.

Preventive medicine is the order of the day. The medical profession is continuously, consistently and perseveringly doing valiant work even in the face of strong opposition, in an endeavor to prevent preventable diseases. Some of the most striking results which have been obtained are in the prevention of tuberculosis by educating the public in its causes and in the manner of its prevention; in the prevention of typhoid fever by vaccination; in the prevention of small-pox by vaccination; in the prevention of infant mortality, of yellow fever, of malarial fever, of the spread of the infectious fevers of childhood by advocating the enforcement of quarantine laws,

and in many other instances too numerous to mention.

If insanity was a condition which spread from person to person like chicken-pox it would have received more attention from the general medical profession and the laity, as regards its attempted prevention. Unfortunately physicians and laymen alike have been inclined to believe that insanity is not a preventable condition. I wish to impress on you the fact that no less than 50 per cent. of our insanity is the result of preventable causes, and I am further of the opinion that it is possible to reduce the occurrence of insanity by even 75 per cent. within a few generations.

We commonly divide the causes of insanity into predisposing and exciting causes. The predisposing causes are further divided into individual and general predisposition. The individual predisposition is either inherited or acquired, and consists of anomalies or abnormalities of the brain which lower the resisting power of the individual so that the liability of the development of insanity is to a variable degree increased.

The exciting causes are those causes which operate immediately or over a period of moderately short duration to cause insanity in those predisposed. Predisposition alone does not cause insanity nor do the exciting causes but rarely cause insanity. The predisposition is the powder and the exciting cause is the match which ignites it. Neither the match nor the powder is operative alone.

The most important of all causes of insanity is the inherited predisposition. It has been declared by some investigators as being present and operative in at least 90 per cent. of those who develop insanity. Many investigators have denied such a large percentage but all are agreed that heredity is the most important cause. Next to tuberculosis there is scarcely any form of disease in which heredity makes itself so powerfully felt as that of insanity. The inheritance may be direct or indirect. It is direct when it is from parent to offspring; it is indirect when it is from some collateral ancestor. It is not unusual for mental and physical characteristics to be transmitted from one generation to the third succeeding generation, without making their appearance in the intervening generation. The inheritance may be similar or dissimilar. It is only in rare cases that the heredity is similar or that the actual disease which afflicts the ancestor is transmitted to the offspring. We observe examples of similar heredity in congenital insanity and in hereditary syphilis. Dissimilar heredity is the rule, the offspring of an insane, epileptic, alcoholic, hysteric, neurasthenic, syphilitic, criminal parent, inherits certain mental and physical characteristics which predisposes him to insanity.

It is most likely that the disease picture will be changed in the offspring. For example, the

children of syphilitics are frequently insane, epileptic, alcoholic, idiotic, imbecilic; likewise the children of alcoholics. Thus Marce reports the case of a drunkard who had sixteen children, fifteen of whom died in infancy, and the only survivor became insane. According to Darwin the families of drunkards die out in the fourth generation. Morel traces the degeneration as follows: first generation, moral depravity, alcoholic excesses; second generation, drunkenness, maniacal attacks, general paralysis; third generation, hypochondria, melancholia, *tadium vitæ*, murder; fourth generation, imbecility, idiocy, extinction of the family. Fleming, Ruer and Demeaux have proved by reported cases that the children of temperate parents when begotten at the time of intoxication of the parents, are to a high degree disposed to insanity and nervous disorders.

From the above you can readily observe that alcoholism in the parent or grandparent is a most potent cause of insanity in the offspring. Kraepelin, a German psychiatrist, one of the greatest living authorities on insanity, has estimated that alcoholism is a direct or indirect cause of at least 80 per cent. of all our insanity. Syphilis in the parent is a most potent factor in causing insanity in the offspring, but as the victim of syphilis is quite frequently drunk when he contracts the disease, alcohol plays a part in syphilitic insanities. Tuberculosis in the parent strongly predisposes the offspring to insanity. The offsprings of the vicious, the criminal, insane and epileptics are very strongly predisposed to insanity.

Brilliant men and women not infrequently spring from low-grade ancestors, but if investigation be carried far enough, an alien strain will usually be found somewhere along the line of descent. The influence should always be considered relatively to the environment. The force of heredity is often discounted by environmental influences. The combined influence of heredity and environment in the production of degeneracy, insanity and crime are demonstrated by many familiar examples.

Dr. Ireland has shown that the unbridled license, idleness, and the possession of unlimited resources, together with consanguinity or inbreeding have unquestionably caused the aristocracy of the Old World to become mentally and physically defective.

Professor Poellman of the University of Bonn investigated the lives and characters of the descendants of a woman who was a confirmed drunkard and who died early in the last century. The five or six generations of her direct posterity number to date 834 persons. He has ascertained the records of 709. Of these 107 were of illegitimate birth; 162 were professional beggars; sixty-four inmates of almshouses; 181 prostitutes; seventy-six were convicted of serious crimes; and seven were condemned for murder. The total cost of caring for this family by the state and the



citizens is reckoned at \$1,206,000, or an average of \$12,000 per year.

The history of the Juke family has been recorded by Richard Dugdale. The descendants of one Ada Juke, otherwise and more familiarly known as "Margaret, the mother of criminals," were carefully traced. The family and its various branches inhabited a certain county in eastern New York. Of the 1,200 direct descendants of Ada Juke, nearly 1,000 were shown to be criminals, insane, prostitutes, paupers or inebriates. These degenerates had cost the state \$1,300,000.

Acquired predisposition to insanity is not unusual. The two most important agents in bringing about an acquired predisposition in the individual are alcohol and syphilis, while tuberculosis is third. All these causes, especially the first two, may by acting on the normal brain bring about such changes as to strongly predispose the individual to insanity.

Among the general predisposing causes may be mentioned the following: age, physiologic epochs, sex, civil condition, climate and civilization.

The census of insanity shows that there is a gradual increase in the number of cases of insanity from the 10th to the 40th year, and a gradual decrease after the 40th. The greater number of cases of insanity develop between the ages of 25 and 45. This is the period of greatest mental and physical strain. Considering the number of insane in each decade compared with the total population of same age it will be found that the liability to insanity practically progressively increases from 20 to 80 years of age. There are certain so-called epochs in life at which time the liability to insanity is greatly increased. These physiologic epochs are at the beginning of puberty and adolescence, from the 14th to the 18th years, the child-bearing period of women, the involutional period of life from the 45th to the 50th years, and the beginning of senility after the 60th year. One of the most common forms of insanity develops during the adolescent period of life. This is known as dementia præcox or precocious dementia. It is a degenerative form of insanity and those affected very rarely recover. Another form of insanity which is called senile dementia develops at the senile period of life. This form of insanity is also incurable.

The insanity is about equally divided between the sexes. The especially dangerous periods in the female, the child-bearing period and the climacterium or change of life, are about equally balanced by the result of alcohol, syphilis and a more strenuous mental life in the male. Yet the United States shows a tendency to a gradual increase in the percentage of males. The percentage of insanity is greater in the unmarried than in the married. The census returns for all the insane hospitals in 1904 show 50.1 per cent. to be single, leaving a balance of 49.9 per cent.

to be divided among the married, widowed, divorced and unknown.

Extremes of climate supply conditions which predispose the individual to insanity. Malaria, yellow fever and other diseases of tropical climates produce a condition of systemic poisoning and exhaustion favorable to the development of insanity.

Insanity is most prevalent among the most highly civilized. In the process of evolution the struggle for existence has changed from a physical to a mental struggle and it is the organ most used that is the most open to the dangers of accident and disease, so we find the brain giving away more frequently as the stresses of life become more and more mental rather than physical. Thus we find that not only is insanity more prevalent among the highly civilized but among these it is found with the greatest frequency in the immense, congested centers of population, where civilization has reached its greatest development and the struggle for existence becomes most severe. As stated above, predisposition alone, without the element of mental stress added, rarely causes insanity. This is especially true of an acquired predisposition such as that induced by alcohol, syphilis and tuberculosis.

The exciting causes of insanity are classed as physical and mental. Of the physical causes the most common are the systemic poisons, either introduced from without or developing within the body. Of the poisons introduced from without which act as exciting causes of insanity we find alcohol in the first place. Second to this we find syphilis; some of the other poisons which cause insanity are morphin, cocain, atropin, lead and mercury, and tobacco in the young. The toxins of various diseases which frequently cause insanity are those from the infection of syphilis, tuberculosis, typhoid, yellow fever, malaria, gripe and pellagra. Of the poisons which develop in the system, acting as exciting causes of insanity, the most common are those originating in the gastro-intestinal tract, from constipation and chronic kidney diseases, also disturbances of secretion of certain glands of the body. Direct injuries to the head such as bullet wounds and fracture occasionally but rarely cause insanity and then only in those predisposed. Exhaustion from prolonged physical and mental strain, from chronic diseases or the result of acute conditions following fever, or the result of considerable loss of blood, may act as exciting causes of insanity.

Many body diseases which do not cause the development of poisons act as exciting causes of insanity. Among these might be mentioned heart disease, certain nervous conditions such as epilepsy, St. Vitus dance and hysteria. Any severe mental stress may act as an exciting cause of insanity. A sudden emotional shock, such as fright, or the horror resulting from the terrible

sights of the wounded and dying in a railroad wreck may induce an outbreak of insanity, while the less acute conditions of worry and anxiety, usually acting over a considerable period of time, may also result in the development of insanity. Anxiety and grief over family and business troubles very commonly cause insanity. There are other occasional exciting causes of insanity but those mentioned above are the most prominent and important.

The statements made above relative to the prevalence and causes of insanity being true, and no one can deny the truth of them, the question which we should ask ourselves is What are we going to do about it? It may not be hurting any one of us very much, but we owe a debt and duty to our neighbor and we owe a debt to posterity. Little has been done to interest or educate the public in this subject. The public must be educated along the line of how to avoid insanity. They must be taught how to avoid doing those things which will cause them to develop a predisposition to insanity and also how to avoid those things which will cause the development of insanity in those predisposed thereto. Parents and teachers must be taught how to train and educate children so that they may avoid developing a predisposition; they must be taught how to recognize defective children and after recognition to train and educate them so that their liability to insanity may be decreased rather than increased.

As I have previously said, in order to treat insanity properly we must begin with the ancestors. It has been well said that society begins its self-contamination at the marriage license window. Here is the fountain head of the stream of all degeneracy that sweeps through all social systems. In view of the very great importance to society of the matrimonial relation of its integers, it is indeed surprising that no effort has been made to rationally regulate or control it. Did you ever stop to think that the honest citizen and the criminal, "the sane and the insane, the temperate and the intemperate, the diseased and the healthy, the pauper and the millionaire, the learned and the ignorant, the intellectual and the weak-minded may meet at the marriage license window on common ground? Does it seem just right to you that the criminal, the insane, the epileptic, the syphilitic, the drunkard, the tuberculous, should be authorized by law to begin the procreation of their kind, the number of their progeny being limited entirely to the volition and physical capacity of those immediately concerned?"

I do not believe the public generally has given consideration to the fact that the marriage license is the agent that sets in operation the machinery for the manufacture of degenerates. We are all aware that these defectives and degenerates are a menace and a burden to society, and

I am of the opinion that it is only by bringing society to a realization that the prevention of degeneracy is much more economic than the cure of conditions which arise from it, that we can hope to see the marriage of the unfit prohibited. In dealing with this subject we must put aside all sentiment and deal with it from a practical standpoint. When it is suggested that the marriage of the unfit be prohibited, we are told that this would be interfering with the personal rights of the people. I believe the rights of society and the rights of children to be born from healthy parents to be paramount to the rights of any individual. In view of the very considerable amount of insanity in the adults who become infected with syphilis, and idiocy and imbecility in the progeny of syphilitics, I am most heartily in favor of a law making it a felony for any one in the infective stage of syphilis or of any venereal disease to marry and infect an innocent person.

I wish to relate the circumstance of a case which came under my observation, which illustrates some of the evil results of the marriage of syphilitics. A young man with syphilis married a young girl. She became infected; a child was born to them which was syphilitic; the child bit the finger of his maternal grandfather and infected him; the grandfather infected his wife; a child was born to them which was syphilitic. Will any of you say that this young man should not have been treated as a criminal and an enemy to society, for being responsible for the infection of those five innocent persons with this most pernicious disease? Would not society have been best served by compelling him to have submitted to an examination before issuing to him a marriage license, and when his true condition was learned, refusing to legalize him to infect the innocent persons who trusted him? We deny the right of marriage to blood relatives. I think it much better for healthy blood relatives to marry than for the insane, syphilitic, drunkards, the tuberculous, the feeble-minded, the criminals, etc., to marry.

Let us work for a law compelling all applicants for marriage license to submit to a medical examination before a license is issued and if the applicant is found to be an unfit person, deny him or her the right to marry. Such a law properly enforced will do more to solve the insane problem than any other one thing. In spite of our best efforts, even though we had such a law there would still be born many children with unstable nervous organizations, who are predisposed to insanity, and with the absence of such a law the number of such children is enormous, a conservative estimate would be one to every 100 born.

This brings us to the question of preventing insanity in those who are predisposed to develop it. "It would be difficult to explain why a subject



of so much importance to the welfare of the community as the study of children should have been so long neglected in this country. A very large number of our citizens, both good and bad, who will call a physician when a child is sick, do not consult the physician relative to the management of the child. The physician is not called to see the child because he is wayward, but because he is wasting; not because it is dainty, capricious in appetite, refusing food that is good for it and craving that which is unwholesome, but because it has pains in its stomach; not for those who are afraid of the dark and unnaturally timid, nor for children who are absent minded, brooding, morose, jealous, spiteful, cruel, mischievous, untruthful, dishonest or immoral." These defects are regarded as moral, rather than morbid, and are treated accordingly, excepting in extreme cases.

Children manifesting one or more of the symptoms enumerated above are defective and should be treated as such. There is just as much sense in flogging a child because it has fever with pneumonia, as in flogging it because it manifests some of the anomalies of character as mentioned above, or is stupid. There is a physical basis for all the anomalies of character: the physical basis which is usually present is in some anomaly or abnormality of the brain. "A sound, well-developed, well-proportioned, well-nourished brain is necessary to a well-balanced intellectual and moral character that is consonant with the standard set up by the social system in which the given individual lives."

We call children who have anomalies of brain development, as manifested by the anomalies of character, neurotic. And we recognize two types of children, namely, the unrestrained emotional type and the restrained emotional type. Briefly stated, the first, or unrestrained, are normal or above the average in intelligence, and manifest the following characteristics: marked timidity and restless energy. The subjects are high-spirited but easily discouraged; imaginative and often superstitious; worried by trifles; apprehensive, given to exaggerating difficulties, but slow in making arrangements to meet them; demonstrative of affection, but such affection is often due to selfishness. They are often vain, and feel that they are unappreciated; passionate at times, and more often querulous and depressed. They crave sympathy, and feel abused if not made over by every one; they resent discipline; they are quick to learn, but forgetful of facts; they work feverishly, intermittently and are soon exhausted; they are enthusiastic but impetuous, and wanting judgment; they suffer agonies of remorse for trifling offences; they are lacking in persistent industry, method and common sense.

The second, or restrained emotional type, manifest somewhat different characteristics from the type just described. In this type the emotions

are strongly felt but the power of control is equally strong. Some of these children are observant and fairly intelligent, but so reticent as often to pass for being dull, sullen and obstinate. Their expression is lowering, their attitude statesque or stooping, their gait is slouching, slow and clumsy. They are often extremely sensitive, shy and proud. They appear wanting in affection, but really yearn for it, and brood much over real and imaginary slights until they become morose, gloomy and revengeful. They are slow to give or take offence and are often shamefully bullied at home and at school, but endure it all with stolid indifference excepting for occasional outbreaks of fury. They are solitary in their habits, introspective, prone to self analysis, imaginative, superstitious, with morbid love of horrors and equally morbid dread of them. They frequently harbor various kinds of phobias, and may develop abnormal conscientious scruples of a moral and religious nature. They take all things seriously and have no sense of humor. The first class exhaust themselves by their emotional excesses and the second class exhaust themselves equally by their suppression of all emotional display. A good descriptive term applicable to the restrained emotional type is the shut in personality.

"In addition to the two types mentioned above another type worthy of mention is the type of neurotic child in which the intellectual powers are below the average and the child recognizes its deficiency, but being ambitious by mere force of excessive exertion he manages to keep abreast of his competitors for a brief period of time, but the exertion proves too much for him and he finally suffers a breakdown."

There are many subvarieties of the neurotic types. It is from the ranks of the neurotic children that the ranks of the insane are being continuously recruited. This will continue to be the case until the state concerns itself more with the welfare of such children and there is a thorough general school inspection and home inspection, thorough cooperation between the parent, teacher and physician in educating and training the developing child. After the neurotic child becomes insane or criminal, the state must take charge of him and I contend that it is not only the right, but the duty of the state to use every means possible to prevent the development of either condition. It is the duty and should be the privilege of the state to go into the home of the defective child and if the environment is not proper, either cause a correction of the environment or remove the child into proper environment. The school inspection should be of such a nature as to locate the neurotic child. The city and state should maintain a psychologic institute where defective children could be examined in a scientific manner in order to determine the cause of the defects. If the causes are removable their removal should be if necessary forced; if the

causes are not removable and the defects curable, the defective child should be educated in a separate school under the direct supervision of a properly qualified and authorized psychologist. The quantity and quality of the education should be determined by the character of the defect and according to the capabilities of the child. The home should be visited, the habits of the child investigated, the environment studied, the parents educated as to the education, training and occupation of the child.

Neurotic children are prone to go to extremes in whatever they do. If they contract the habit of masturbation, cigaret smoking, alcohol or drugs, excesses are inevitable and a development of insanity very sure. Those who are precocious and disposed to be studious increase their degeneracy by overstudy. These children do not take higher education well. They should be taught to follow occupations in which they will deal more largely with concrete rather than abstract problems. They should be advised against entering the law, medicine, ministry or teaching. They will thrive better in the study of hogs, chickens, cattle and horses than in the study of psychology and logic. Their mentality will be better conserved by the study of fruit raising, gardening and all manner of horticultural and agricultural subjects, than in the study of philosophy, history and fiction. Their education should be limited, and as they are prone to inconstancy of occupation, they should be encouraged to stick to something, preferably along the lines mentioned above, or mechanical pursuits. I believe all defective children should be made wards of the state in order that their training, education, habits and occupation might be supervised to the end that their liability to insanity, vice and crime could be decreased. The state must take charge of them after these conditions have developed, and why not before?

As alcoholism is such a potent factor in the production of insanity we can make but little progress in the prevention of insanity until the state provides a suitable place for the treatment of our vast army of alcoholics. A hospital for this purpose should be provided in the country on a farm of adequate quantity and quality in order that those who are physically able to work may do so. Such work will aid in the cure and also decrease the cost of their maintenance. The law governing commitments should be so drawn that an alcoholic, whether rich or poor, who becomes a private or public nuisance or a menace to society because of his alcoholism, may be committed for an indeterminate sentence, and those who are in need of treatment and so desire should be permitted to commit themselves. No one should be released excepting by the concurrence of the trial judge and an official fully competent to judge of the physical and mental condition of the patient, and when released as cured he should be paroled

for a period of not less than one year. I am not a political prohibitionist, and do not believe prohibition to be a political question, but recognizing alcoholism as being more potent than all other causes in the production of insanity, vice, crime, pauperism and all other forms of degeneracy. I should say: God bless the day on which, and the means by which, alcohol is banished from the face of the earth.

Syphilis stands second to alcoholism as a causative factor of insanity. I have previously referred to the control of syphilis in relation to marriage; the public should be educated concerning the nature of syphilis and its consequences. Public prostitutes should be inspected, and those having syphilis in the infective stage should be quarantined until well.

Those who are disposed to insanity oftentimes feel and recognize its insidious development, yet there is no place supported by the state where they may go and receive treatment in order that the insanity may be checked in its incipency. There should be a psychopathic hospital, supported by the state, where those who are threatened with insanity may go and receive appropriate treatment. Such a hospital, if properly equipped and conducted by an expert alienist could be made of much value in reducing the number of those who become actually insane. Strenuousness, properly regulated, is a good thing, but I believe we have been experiencing too much of the foolish and the fool-making kind recently. The occasional luxuries of our ancestors have become our daily necessities. The back to the land and simple life movement, if pushed to a successful issue, will aid very materially in reducing the amount of insanity.

In conclusion I wish to call your attention to the fact that the conditions which are responsible for so much of our insanity are at the same time responsible for the greater part of our crime, vice and pauperism, and the remedies are identically the same. Those things which have been suggested as antidotes of insanity are at the same time very effective antidotes of crime, vice, pauperism and all other symptoms and forms of mental and physical degeneracy.

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#### DIFFICULT CASES OF HERNIA, WITH SPECIAL REFERENCE TO SLIDING HERNIA \*

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In the performance of several hundred operations of hernia it would seem strange if many interesting and difficult cases had not presented themselves. The scope of the subject of hernia and the time allotted will, however, permit only a limited review of the cases, and it may be

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desirable therefore to consider only certain diagnostic and operative complications. In reporting my observations I shall refer only to those cases with which I have had personal experience.

Hernia should be regarded as a surgical condition which, if not properly treated, may by incarceration or strangulation endanger the life of the individual. The neglected cases show us the great risks that persons with hernia had assumed. The excellent results that are now obtained by the more modern operation for hernia and the safety with which the uncomplicated operation can be performed should encourage patients to have a radical operation performed, if only for the comfort that may be obtained. Sooner or later nearly every hernia demands attention or urgent surgical intervention.

It would be interesting to study the cases of hernia from their etiologic significance, but a discussion of this phase would demand a special consideration of the subject. A number of investigators have made careful observations relative to the cause of hernia, and there seems abundant proof that in many cases the sac is preformed and of congenital origin. This applies in particular to the inguinal and femoral hernias. There are certain hernias, however, that are acquired and are caused by increased intra-abdominal pressure in the presence of defects in the supporting abdominal structure. A proper understanding of the manner in which the hernia was formed is of the greatest value as an aid to diagnosis and to treatment.

There are many conditions that may render the diagnosis of hernia puzzling, if not difficult. Frequently in stout or corpulent individuals the diagnosis is made difficult by the great deposit of fat. In a woman who weighed 223 pounds, tumor in the inguinal or femoral region could not be made out with certainty, and the diagnosis of hernia was made from the symptoms of strangulation. At operation a strangulated inguinal hernia of the left side was found.

Lipoma situated in any of the regions usually occupied by hernia may simulate very closely a hernial sac containing omentum. In the smaller hernias, varicocele sometimes simulates hernia, and likewise cysts and cold abscess may be mistaken for this condition. In the large hydrocele, especially when the sac contains bloody fluid, in hydrocele of the cord and in hydrocele and hernia, the differential diagnosis may be difficult. Enlarged glands and tumors may under certain conditions very easily be mistaken for hernia. For example, in one instance an old man whose bowels had not moved for some days and who discovered an enlargement in the groin, consulted a physician, who hurried the patient to the hospital for operation. The tumor resembled an incarcerated hernia, but no operation was performed. He died some weeks later, and at autopsy the condition was found to be sarcoma

of the cord with metastases in the heart and other organs.

In another instance a woman who was brought to the hospital in a critical condition, and from whom a vague history could only be obtained, was thought, on account of the symptoms, to be suffering from bowel obstruction. There was a swelling in the groin which resembled a strangulated hernia, but at operation this proved to be enlarged sarcomatous glands. At autopsy it was found that she too had metastases in the heart.

There are times when the diagnosis of hernia is evident, but there remains great doubt as to the nature of the contents of the sac. I have met with cases in which the sac contained not only small bowel or omentum, but also such organs as the appendix, colon, ovary, tube, testis or bladder. Often several organs are encountered in a single sac.

Again it is at times difficult to determine whether the contents are strangulated, inflamed or gangrenous. We must not overlook the fact that sometimes appendicitis takes place in a hernial sac, and in several instances I have removed the appendix which was a part of the hernial contents.

In the presence of an uncomplicated and easily recognized hernia there may be other conditions present that simulate strangulated hernia.

In a certain case a woman who had an inguinal hernia with all symptoms of strangulation was operated on for inguinal hernia, but no strangulation of bowel was found. The true condition was one of extensive mesenteric thrombosis. Another woman who also had an inguinal hernia with symptoms of strangulation was found at operation to have the condition complicated by a ruptured extopic pregnancy.

In multiple hernias it may be easy to miss the correct diagnosis. This was true in a case in which there was a right reducible hernia and which presented all symptoms of bowel obstruction. At operation a simple hernia was found but the bowel obstruction was not located. The patient died and at autopsy it was discovered that a knuckle of bowel involving only a small portion of the wall of the bowel (Richter's hernia) was firmly wedged in the internal ring of the inguinal canal on the left side and that although the lumen of the bowel was only partially occluded, nevertheless pronounced symptoms of ileus were present.

The correct diagnosis in the rarer and hidden forms of hernia is seldom made. Strangulation of bowel in a properitoneal hernia was mistaken for appendicitis and without a history of trauma the diagnosis of diaphragmatic hernia is usually overlooked. It should be remembered that while in the great majority of cases the diagnosis of hernia is simple, in others there may be conditions present which obscure the true condition so that a correct diagnosis is rendered most difficult, if not impossible.

In the surgical treatment of hernias many difficulties may at times be encountered. Some of the difficulties are due to the size of the hernia, the anatomic location, the existence of multiple hernia, the nature of the contents of the sac, the complications of adhesion, of hydrocele, of tumors, etc., to incarceration, strangulation, congenital defects, to the rare forms of hernia, and to the presence of other complicating conditions or diseases.

Hernias in which the sac is large may present difficulties at operation, owing to the nature of the contents. In an incarcerated hernia the size of a coconut were found the cecum with the appendix, the ascending colon, small bowel and omentum. At times in large scrotal hernias I have found it advisable to resect a part of the scrotum. Again in large hernias of long duration it may be difficult to return the bowel, and resection of bowel may be necessary. When associated with hydrocele or varicocele dissection may be difficult.

In some hernias of long standing I have found the intestine matted together so as to form a large mass, making reduction impossible until the loops of bowel were liberated. It sometimes happens that constricting bands of adhesion are found around a loop of bowel. This condition invites strangulation, and the danger of this condition is not removed when the hernia is reduced by taxis. When the cord is injured so as to interfere with its blood-supply, it is better to perform orchidectomy, for instances of gangrene followed by peritonitis were met with as a result of such injury.

Operation for hernia in infants requires special care, and it is advisable to select instruments suitable to the size of the patient. In old age hernia operations, especially if the hernia is strangulated, are apt to be hazardous. When the patient's condition is weakened by bowel obstruction or when stercoræmia is present, the operative risk is very great, and in these critical states the selection of an anesthetic and the nature of the anesthesia are of the greatest importance.

Operations, usually for strangulated hernia, in the presence of constitutional diseases necessarily become greater operative risks. In a case of strangulated hernia brought on during a coughing spell while suffering with pneumonia, I resorted to local anesthesia in operating for the hernia. In another instance typhoid fever was a complication. In a third case a postoperative ventral hernia was complicated by an acute attack of gall-stones. In other cases hemorrhoids, fistula, urethral abscess, adenitis and uterine fibroid added to the difficulties of the operation. Strangulated right femoral hernia coexisting with ruptured extopic pregnancy as mentioned before is an unusual occurrence, and appendicitis occurring in the hernial sac is rare enough to be of special interest. In some cases the sac is associ-

ated with the tube and ovary, and this I have seen in two instances.

Strangulated hernias are always apt to be complicated and difficult, and the danger of the operation is increased by the weakened condition of the patient. When the bowel is gangrenous, resection is advisable if the strength of the patient warrants, and this is often best performed through a supplementary abdominal incision. The intestines and mesentery may by this operation be more easily inspected, and a more satisfactory result can usually be obtained. After resection of bowel for a gangrenous condition I was once unfortunate enough to have postoperative hemorrhage. On reopening the wound and examining, I found that the hemorrhage had come from the stump of the mesentery in the region where thrombosis had occurred. After proper ligation the hemorrhage was controlled, and the patient made a satisfactory recovery. After resection for gangrenous bowel there is always the possibility of secondary obstruction, and this complication I had to attend to in one instance.

In these cases of strangulated hernia the mesentery often plays an important part. It may become greatly thickened as a result of lymphatic stasis or venous thrombosis, and reduction of the hernia or resection of bowel are on this account made more difficult. When mesenteric cysts are present, the operation may become exceedingly difficult as shown by the following case:

The patient entered the hospital in a very critical condition and was suffering with strangulated inguinal hernia on the right side. The sac was as large as a child's head. The usual incision for inguinal herniotomy was made and the sac isolated and contents examined. The loops of small bowel were densely adherent. The large bowel was also found in the sac and its peritoneal coat had been stripped off, evidently by efforts at forcible reduction. This point illustrated one of the dangers of taxis. In addition to bowel, there were two mesenteric cysts, one as large as the fist, the other the size of a goose egg. The cysts were considerably larger than the hernial ring, indicating that the hernia had been down for some time. The patient was in a critical condition and no efforts at reduction were made, but instead an exclusion operation was performed by making an end-to-end anastomosis of ileum to sigmoid. The devitalized bowel found in the hernial sac was left undisturbed. The patient died twelve hours after the operation and it was ascertained that the sac contained six feet of small bowel, a part of the colon and the two mesenteric cysts. Cysts of the mesentery are quite unusual, and it is rare to find them in a hernial sac.

Congenital abnormalities often render hernia operations difficult, and those which are most frequently encountered are associated with undescended testicle.

An unusual case of this nature occurred in a little boy 11 years of age who had a congenital hernia on the left side and a condition of double undescended testicles, the scrotal sac, therefore, being empty. On the left side the testicle could be felt in the inguinal canal, but it could not be detected on the right side. An incision above and parallel to Poupart's ligament was made as in regular herniotomy. The sac was dissected



free and was found to contain a testicle the size of a hazelnut. Associated with the cord and at the location of the internal ring, there was the second testicle which, however, was smaller in size. This testicle, with its vessels was separated by dissection from the other structure, and by a special procedure was deposited intra-abdominally in the scrotum on the right side. The left testicle was deposited in the left scrotal pouch, the hernial sac which was as large as a goose egg, was cut away and closed and the operation for hernia completed.

Occasionally multiple hernias are encountered that render operations tedious and difficult. If the hernias are large, it may be difficult to return the bowel, and owing to the increased abdominal tension complications may arise. However, in one instance one femoral and two inguinal hernias were repaired at one operation with a favorable result. When the abdominal wall is weakened by multiple hernial pouches on the same side, special care is required in the repair of the hernias.

Umbilical hernias, especially if they have existed for some time and are large, or if they are strangulated, may offer great difficulties. For the smaller hernias the Mayo operation gives the best results, but this operation is less satisfactory with large hernias where the abdominal wall is thin or flabby. Associated with this form of hernia are the interstitial epigastric hernias which, when multiple, may render an operation for repair very difficult.

When a hernia has been treated by a truss, by any of the injection methods or by the improper use of silver wire, and a cure has not resulted, the radical operation is often made more difficult. Troublesome adhesions are produced by wearing a truss or by the injection method, and on several occasions it was necessary to remove masses of paraffin that were the result of the injection method. In a case where silver wire had been used and recurrence of the hernia took place, and in the subsequent repair of the hernia, great difficulty was encountered in the removal of the wire.

Most postoperative hernias require great care and skill in their repair. In ventral hernias where the muscles have been severed transversely the difficulty of repair is increased. In a patient who had received a stab wound of the abdomen which severed the rectus transversely and which also amputated the appendix, the repair of a postoperative hernia was found most difficult. Postoperative hernias associated with fistulae will tax the skill of the most experienced operators.

All the rarer forms of hernia present difficulties at operation.

The interstitial hernia is frequently complicated by undescended testicle. In a certain proportion the bladder is found associated with the hernia, or there may be hernia of the bladder alone. I have encountered three cases of hernia of the bladder.

Properitoneal hernia is very difficult to treat, and all the more so since most of the cases come

to operation at an unfavorable stage. A case of properitoneal hernia that had been treated for appendicitis came to the hospital in a critical condition. The history of the case was indefinite and there was nothing to indicate that a hernia existed. At the operation a properitoneal pouch was found which was located along the right side of the bladder, the opening being opposite the external ring. The pouch contained loops of small bowel which had become gangrenous. The patient's condition prevented extensive operative procedures, and as is usual in these conditions, the patient succumbed with all the symptoms of bowel obstruction.

In another case of properitoneal hernia the sac was multilocular, one portion occupying the inguinal canal, the other portion taking a direction toward the bladder. The sac contained omentum which was removed from the external portion of the sac. After ligating the omentum and severing, it was allowed to retract into the abdominal cavity; one portion, however, remained adherent in the internal pocket of the sac. A hernia of this type not presenting serious symptoms might easily be mistaken for a hernia with a simple sac, and the operation completed without attending to the internal portion of the sac.

A true diaphragmatic hernia is rarely diagnosed or seen, but this condition was encountered accidentally while operating for a stab-wound of the abdomen. The patient entered the hospital in a critical condition and was suffering from hemorrhage and shock. It was found that the hemorrhage came from two intercostal vessels, which were ligated. While exploring the abdominal cavity it was found that the omentum had ascended into the pleural cavity through an opening in the diaphragm. The patient rallied after the operation and it was learned from him that he had been stabbed some years previously in the chest. He did not have the vitality, however, to withstand the great loss of blood, and when an autopsy was held the true condition was ascertained. The stab-wound in the chest had injured the diaphragm in such a manner that the peritoneum was left intact. This permitted the formation of a peritoneal pouch into which the omentum had ascended. The mass resembled a large pear in size.

A class of hernias that presents difficulties at operation and to which I have given special attention is the so-called sliding hernia.

By a sliding hernia is meant one in which a fixed portion of bowel, the cecum or sigmoid, has descended through the hernial opening into a hernial pouch, in which case the descended portion of bowel is not entirely within the sac, only the anterior and lateral portions being covered by peritoneum.

Because of the attachment of the bowel in sliding hernia, recurrences after operation are common; and unless special operative procedures are used, a proper repair of the hernia is not possible.

Since the sac of a sliding hernia is incomplete, there is added the danger of accidentally entering the lumen of the bowel.

The principal steps of the operation for sliding hernia which I have devised and used with good results are as follows:

After making the usual incision for hernia, the sac is exposed, care being taken not to injure the bowel, bladder or the essential structure of the cord. The sac is then opened at its lower portion and the contents are returned to the abdominal cavity. In the sliding hernia it will be noticed that the sac is incomplete and that the anterior and lateral surfaces of the bowel are free, while the posterior portion is adherent. Large clamps which grasp the sac are placed on either side near the fixed portion of bowel and parallel to its lumen. A second set of clamps is placed above these so that the sac may be cut between the first and second set of clamps. These incisions should run up to, or preferably beyond the ring, and by this procedure a flap of bowel is left on either side of the bowel.

The bowel is then grasped and pulled upward as if to produce traction on the mesentery; and by means of careful dissection the bowel is made free from the underlying structure. The bowel is loosened well beyond the ring, taking care not to injure the blood-vessels which lie in a sort of newly formed mesentery.

The lateral flaps having been turned back so as to cover over the denuded area, are sutured at their margin. In order to permit proper approximation of the flaps it may be necessary to incise each flap at the ring, and in the process of making the flaps and in the suturing, care should be taken not to produce constriction of the bowel.

After the bowel has been made freely movable, it is returned to the abdominal cavity, and the next step consists in the partial reconstruction of the sac so that it may be sutured or ligated, as is done in uncomplicated hernia operations. In the reconstruction of the sac a triangular space of denuded bowel may be formed just internal to the ring, which space should be closed over by suturing the peritoneum. The sac having been ligated or sutured, the operation of hernia may be completed by any of the approved methods.

The first case of sliding hernia operated on by the reconstruction of sac and flap method was in 1904. In all, fifteen cases were operated on by this method, of which ten were sliding hernias of the sigmoid and five were sliding hernias of the cecum. All the cases occurred in adult male patients. In one case the sliding hernia was through the femoral ring, there being also present a right and a left inguinal hernia. In eight cases these were double inguinal hernias and in two instances these were complicated by femoral hernias. Undescended testicle was encountered once and hydrocele four times. In the fifteen cases, twenty-five separate herniotomies were performed, all the cases making satisfactory recovery.

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## PHYSICAL MOVEMENTS OF MAN HIS MENTAL INDEX \*

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The physical movements of man record his mental status. His natural demeanor and manner of locomotion are a walking index to his intellectual forces.

By careful study of the natural gait of individuals we can determine with some degree of accuracy cerebral nicety, thereby fixing the standard of mentality in those with whom the comparison is made. Not only is this apparent in man, but applies equally as strong to lower animals. We speak of the cunning fox, the sly old wolf and the wise deer, and so on. All fowls of the air, fishes of the sea and animals in general that are swift on foot, fin or wing are highly supplied with instinctive propensities. We can observe this mental distinction in both high and low, and especially is this more marked in man than in all the others. So forcibly are these facts presented to me in the study of human nature that I am led to see the feasibility of utilizing this pathognomy in discriminating the various forms of cerebral abnormalities.

Congenital cerebral inertia is detected in the infant by its vacant facial expression and its peculiar maneuvers, long before speech is developed. It does not require an expert alienist to read the mental record of these little unfortunates by their physical awkwardness and muscular incoordination. As they grow older this physical feature becomes more noticeable, the brain fails to keep pace with the body functions and we have a deviation of mutuality between mind and body, the two cease to harmonize and to cooperate one with the other. As the child's age and size continue, extending beyond that of ordinary babyhood and infantile ways, this prominent physical sluggishness, so indicative of mental feebleness, becomes a source of continued humiliation and lamentations to sensitive parents, and they strive to conceal the supposed stigma by keeping the child in the social background.

Beginning with man's anatomic origin, we find that the oldest structures in the human body are the brain, spinal cord and their slightly retarded osseous contemporaries, the skull and the spinal column.

The latter two are just late enough in development to give the brain surveillance over the entire anatomic and physiologic arrangement. Nature builded the brain as a nucleus and then sought to shape and to train all else pertaining to the body in a manner most favorable for mental servitude. The many muscles of the human body are just so many servants doing time for the physical monarch—the brain. Placed on the high throne by selection, the brain

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is in command of the reins of physiologic government, directing our physical forces in all that we do.

If the overseer, the brain, becomes intoxicated or deranged from any cause, rendering the cells unfit to perform their duty, we at once observe the lack of proper command in the general ataxia that follows. Like a drunken pilot at the steering-wheel of a great ship that allows the craft to flounder about wildly, alcoholic stupidity of the brain produces well-marked autotoxemia. This pathologic feature prevails in all insane subjects. While alcoholism is acute or functional in character, yet it well illustrates the physical conditions resulting from cerebral inactivity. If by hereditary, congenital or early traumatic or pathologic causes the child's brain becomes influenced in cell development, there is an ever-present abnormal physical function in proportion to the existing cause, thereby recording the individual's mental acumen. Such subjects are classed as idiots or imbeciles and are not amenable to treatment except by persistent repetition of the most simple words and ways, just as you would teach a parrot to talk.

Early recognition of such infantile dementia is of much importance in aiding or planning a line of treatment or training to pursue. Parents are too prone to keep weak-minded and idiotic children in the background out of the family circle and association. This is all wrong in many instances. It is no disgrace to be the parent of such unfortunate children and many thus afflicted, if they had systematic training, might be educated out of their mental lassitude. The mental conditions prompting such parental behavior in closing the mouth and restraining the weak-minded only serve to aggravate the mental defect.

Schools for the weak-minded have proved a great success and I believe that kindergarten or home treatment or training for such children would prove a blessing to them and all concerned beyond measure. I do not wish to convey the impression that all such unfortunates could be made intelligent and wholly responsible, but I do believe that many children whose mentality is below normal could become at least self-supporting and law-abiding citizens when reaching maturity. The weak-minded and insane are unfortunately ridiculed too much by the public instead of giving them help and encouragement. There should be some provisions made in our public schools for teaching those who are mentally unqualified to keep pace with the brighter pupils in school. Everything is against the advancement of a pupil who fails to come up to the standard mentally, and but little hope can be maintained of ever bettering conditions under such menacing environments. Examination and discrimination of pupils should be made from time to time by a competent physician appointed by the school-board for that and other purposes, and grade them mentally according to percentage

made in the physical test. If every child when entering school had a certificate recording his mental status it would aid the teacher much in assigning work for each individual pupil.

Why should we abandon the weak-minded to their sad fate when an effort at improving their mental condition is so well worth while? If we can improve the physical defects of a weakling by persistent calisthenics and athletics, why can we not do the same thing with our crippled-minded young by extreme efforts at teaching them things that tend to overcome their mental defects? Science has demonstrated the unlimited extent to which mental impressibility may be increased, exerting power over all faculties of the human mind; and we should never cease trying to excite the torpid mentality of a child as long as there remains a speck of hope of improvement. No matter how defective the brain cells may be, it is possible to rouse them into some degree of activity. The largest intellectual developments avail but little to those who have been deprived of all means of instruction; while on the other hand persons of the most meager intellectual growth become decidedly intellectual and possess rich stores of knowledge through the influence of thorough and efficient mental education. The facility with which the brain may acquire an increased development by proper excitement, while other organs may become paralyzed or atrophied by habitual inactivity, explains the great power of education and society over the formation of character. The brain is the great dynamo of all the physical forces of the human body, and the motor nerves are the distributing outlet of this physical center. Agitate this dynamo and the impression is conveyed to all the nerve branches in the form of muscular incoordination. Perfect muscular action then depends on the quality of nerve influence sent out from the center, giving us unlimited freedom of action in every direction, characterizing the individual accordingly.

Weigh and compare imperfect nervomuscular functions with that of normal movements of intelligent man, recording the contrast, and you have the mental index of the former according to natural physical laws.

The tottering gait of the aged is due to the running down of the dynamo. All slow-walking, unsteady old people are in their dotage. You can judge a man's age by his walk. We are as old as we walk. By the walk of the aged, as well as all others, can we judge their mental condition. We need not converse with them to discover this fact. That invisible juvenile electric fluid of animation that abounds in the nerves of every healthy youth causing quick, active response, no longer is generated in the dynamo—the brain—of the old. Premature senility is more marked in the uneducated and in those who have allowed their brain to remain dormant through life, not arousing the slumbering cerebral cells to even one

original thought, just drifting lazily along on the sea of life, contented at letting the world do its own thinking. This is the class of brains that rust out instead of wearing out. The educated mind, the thinking mind and the persistent mind is one that retains its brilliancy to a good old age.

The first step of independency of the infant is to sit alone, then to creep and finally to walk unsupported. The first steps taken are, like the feeble steps of the aged, very tottering and unsteady but as the brain develops the gait becomes more firm and certain, registering a higher degree of intelligence from day to day. Children that learn to walk early in life are called "smart" by parents and friends, and babies that are slow in walking are looked at with a suspicious eye as being dull mentally, etc. These signs have long since been discovered by the laity, and the public use them unconsciously many times in determining the mental criterion of peculiarly acting infants.

Fully developed minds that become suddenly deranged do not register that characteristic physical awkwardness immediately, as the well-trained muscles of a previous active mind hold sway for some time, but when the stored-up nerve energy becomes exhausted, then we have a paresis coming on gradually in proportion to the mental disturbance causing it.

Mental grading of children by the physical process is of great importance in diagnosing and prognosing different forms and grades of idiocy and insanity. By the character of the movements of patients we may determine the nature of the dementia, whether acute or whether the subject is a congenital imbecile. If congenital, we cannot hope for a complete recovery, but we must endeavor to better conditions of those that have a trace of reasoning power left by a never-ceasing course of mental training. By educating such unfortunates to a social degree that will allow them to enter into family fellowship, we have performed a deed of human kindness to patient and parents.

In the interest of those who wish to go farther in the study of human character and mental disposition by physical demonstrations, let me call your attention to the various styles of walking, handshaking and muscular maneuvers in general of individuals that you may make comparative study of mind and movement. The lazy, relaxed, sloven, slow-walking man depicts his mental attitude. Stupid in movement, stupid in mind. Slow, imperfect speech, slow in thought and in spirit. He is lacking in mental sagacity. His natural inclination is to revel in coarse vulgarity and to shun mental refinement. He exercises, if at all, the baser thoughts of his mind, instead of cultivating the superior organs, establishing affections in refined society, subduing the activity and power of the basilar organs of the brain. We find that those who habitually cultivate the intellectual and moral faculties at the same time subdue

their animal passions. Men of highly cultivated intellect are generally in good control of the basilar region of the brain. The great majority of criminals are uneducated men and women. A purely intellectual education diminishes the force of the lower occipital organs by directing the excitement to the front lobes of the brain, and thus diminishes criminal tendencies. Then to improve the human race we must seek to educate that class of unfortunate individuals from whence criminals come. The quick, pertinent person is prone to mental alertness. Quick movement, quick mind. Quick talk, quick thoughts. He seeks refinement and shuns the vulgar. He loves educated friends and strives for their friendship. He likes work better than idleness. A normal mind prefers progressive action, while an abnormal brain seeks the eddy in the current of the sea of life.

The aged, with their cerebral softening, or serebro-arteriosclerosis, possess the latter mental characteristics. The slow muscular movements, the slow mental action and an indifference to all things that once interested them is indicative of the lack of appreciation from mental aptitude. If conditions of the brain of the aged, caused by mechanical obstruction, produce such mental changes in the individual, then when we find similar conditions in the young and middle-aged we know that some unseen force in the brain is responsible for the abnormality. All intermediate cases between these two mental extremes should be studied according to position occupied on the physical scale. All human mentality has a common or fixed plane, grading either high or low or blending between the first two forms. Individual mentality stamps its impression in the physiognomy of every human being, let it be strong or weak. Mental defects of congenital origin present a peculiar facie unlike that of normal subjects. The wide-open, leaky mouth, lubberly lips, the dull, expressionless eyes and the jerky or unsteady movements of the head are the most prominent features in the natural-born imbecile. The extent of the imbecility of the infant is determined by physical demonstrations of the child. While this is true in children, it is equally true in adults.

Closely compare physical analysis of men and you will observe the mental differences existing therein, with no two persons possessing the same physiognomy, and all differ mentally just as widely as the contrast is marked in individuals.

The advantage thus obtained by physical study of neuropathy is in ascertaining the cause and extent of the morbid mind of children early in life, removing the barrier to domestic happiness and associations by placing more favorable environments about such children in the way of mental training in a simplified and impressive manner. Cultivate cerebral activity persistently with all slow-developing brain function in chil-



dren. Cerebral calisthenics, if you prefer, is equally as beneficial to mind as it is to muscle. So model the brain while young and plastic in keeping with the harmony of human intelligence and be rewarded a soul satisfaction for the effort spent in serving worthy, dependent fellowman.

### SOME PRACTICAL PROBLEMS IN EAR, NOSE AND THROAT PRACTICE \*

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(Concluded from page 431)

The method, however, consists essentially of this: Having ischematized and then cocaineized (the writer uses the pure commercial solution of adrenalin chlorid and then a 20 per cent. solution of cocain with 5 per cent. resorcin, for this purpose) the posterior end of the hypertrophied inferior turbinate, we cauterize it from before backward in three stripes, one on the side, one underneath, and one on the top, down to the bone, with an electrode similar to the one I show you here, so curved as to pass below, behind, around, and over the soft palate, clear into the posterior naris; the usual apparatus for such instrumentation—palate retractor, posterior rhinoscopic mirror, tongue depressor, etc.—being employed as the judgment and skill of the operator and the particular behavior of the patient's own nasopharynx, palate and tongue demand. The electrode then, with the operating-blade somewhat bent toward the side of operation, is first introduced into the posterior nares, cold, placed where it is desired to begin the cauterization of the first stripe; and then, before the stripe is begun, heated to the highly incandescent degree—this high degree of incandescence being recommended here, inasmuch as the enlarged and succulent turbinate very rapidly absorbs an unusually large amount of heat from the active electrode; and because further, it is always necessary to remove from the contiguous eschar it has created, the electrode, while still in an active incandescent state, lest otherwise it drag away with it the adherent eschar, thus exposing the wounded blood-spaces, inducing free and possibly alarming hemorrhage in this rather inconvenient and inaccessible region—an accident that never occurs in otherwise justifiably operable cases when the operation is properly done. No one practically familiar with nasopharyngeal and postnasal instrumentation, whose eyesight is reliable in posterior rhinoscopy, and whose hand is steadily under his own control, need hesitate with confidence to attempt this useful operation.

The manifold advantages of removing thus instantly, without pain or distress, or probability

of serious hemorrhage with its attendant dangers and horrors of plugging the posterior nares, etc.—of removing, I say, without these disadvantages and risks, nasal stoppage and also pressure on the anterior lip of the Eustachian tube and contiguous region, thus facilitating the Eustachian tube's pneumatic permeability through the scar traction on its anterior lip, so to speak, need no encomium other than the universal testimony as to its own practical actual results.

Leaving further discussion of the advantages of this method to its distinguished author, the writer would close his paper with a brief consideration of the practical problem of how to obviate the tendency to intense reflex spasm of the larynx in removing spiculated, rasping foreign bodies therefrom. The great practical difficulty encountered in the effort forcibly to remove a foreign body of this character when once firmly lodged within the larynx, is that of contending with the intense reflex spasm usually excited thereby.

This fact was brought squarely before my attention on a certain occasion where I was confronted with a case of cockle-burr on the vocal cords; and it was my experience on that occasion that has prompted me to make a suggestion to-day with respect to a possible method, practically of obviating this difficulty in similar cases.

Those of you who have met with cases, let us say, of cockle-burr within the larynx—and there may be many such cases that have never appeared in our literature—or who have read the reported experiences<sup>2</sup> of such men as Dr. Max Thorner<sup>3</sup> of Cincinnati, Dr. Crawley,<sup>4</sup> Dr. J. F. Thompson,<sup>5,6</sup> Dr. Sajous,<sup>6</sup> and our late lamented fellow-members, Dr. William C. Glasgow<sup>7</sup> and Dr. Elisha H. Gregory<sup>7</sup> with him, both of St. Louis, will appreciate the gravity of the practical problem here presenting, which has to face as well the possibility of tracheotomy; of bronchoscopy; of forcible avulsion of the body of the cockle-burr without its tentacles or spiculæ, thus left with their sharp, broken stems protruding, while adherent or imbedded in the ventricles or tissues of the larynx; of all the grave phenomena and difficulty of management that must attend such condition—the persistent presence of multiple foreign bodies of this character in this situation; of some one or more of these slender spicules dropping down subsequently suddenly and unexpectedly into the trachea or a bronchus; of intense inflammation or edema at, or extending from, the region of the rima glottidis—these need only be mentioned, sufficiently to suggest the gravity of the practical problem presenting.

A brief account of a case of this character successfully disposed of under the method detailed

2. Burnett's System of Diseases of the Ear, Nose and Throat, ii, pp. 525-526.

3. Cincinnati Lancet-Clinic, 1886, n. s., xvii, p. 93.

4. Medical News, Philadelphia, 1885, xlvii, 677; and 1886, xlix, 657.

5. Jour. Am. Med. Assn., 1887.

6. C. E. Sajous' Annals of the Med. Sci., iii, p. 306.

7. Courier of Medicine, St. Louis, i, No. 5, pp. 518-520.

\* Read in the Medical Section of the Missouri State Medical Association at its Fifty-Fourth Annual Meeting, Kansas City, May 17, 1911.

below, may perhaps best explain its advantages. This case, by the way, has, on a former occasion, been presented to the St. Louis Medical Society, and was thereafter published with illustrative cuts by the *Medical Fortnightly* of St. Louis in its issue of Sept. 11, 1905; reprints of which I have brought with me to-day for distribution among those who may care for a copy thereof.

A woman, 22 years of age, was brought to me by her family physician with an ordinary cockle-burr in her larynx, lodged there two evenings before in her effort to remove the burr from her cloth gloves, to which it had obstinately adhered after her having picked it off her dress-skirt. Situated as it proved to be later, on the anterior portion of the vocal cords, at the vocal, but not at the respiratory glottis, she was unable to speak other than in a hoarse whisper, yet was able with comparative comfort to breathe.

Before her first visit to my office, attempts had been made to locate and dislodge or remove the offending intruder, an esophageal bougie even having been introduced; but all in vain.

Right on the vocal glottis, the respiratory portion being comparatively uninvolved, was seen the cockle-burr — which I show you in this bottle. It lay anteroposteriorly, its long axis almost exactly corresponding with the median vertical plane of the rima glottidis. Its base was directed backward; the point of the sharp spine at its apex was imbedded anteriorly, apparently just above the commissure of the vocal cords, in the lower curve of the cushion of the epiglottis. From its position it seemed as if the tips of some of its tentacles or little hooklets must necessarily be already imbedded in the ventricle of the larynx on either side. Realizing from the situation of the cockle-burr, that if I would with less danger and less damage to the larynx more peaceably and entirely remove it by the channel through which it had entered, some method must be invoked effectively to obviate the intense laryngeal spasm that seemed certain to result from attempting its avulsion in the usual manner. It occurred to me — and this is the suggestion that I venture to offer for your consideration to-day — to invoke the aid of an antagonistic reflex — a reflex more imperious by far than that even of the dreaded reflex laryngeal spasm, namely: that of the demand of the body for oxygen, after forced, prolonged expiration.

It occurred to me also that the necessity of emptying the lungs at once, immediately after a forced, deep and full inspiration, would prove so imperious as to eliminate the tendency to spasm of the larynx, if at the instant of beginning such uncontrollable expiration, the foreign body were seized firmly with the forceps without traction; known to be securely held; and then held thus immovably until the termination of the concluding, purposeful forced prolonged expiration, as explained above; when, during the ensu-

ing condition of forced inspiration, with extreme abduction and relaxation at the rima glottidis, the cockle-burr with care probably could be most favorably removed.

To forestall useless discussion, let it be premised at once that the operator, as in all such or similar laryngeal instrumentation of a mechanical or surgical character, appreciates the exact condition with which he has to deal, and sees exactly what he and his instruments are doing: for here it is of course imperative for the operator, not only to seize the foreign body properly, firmly and securely, and hold it so until the exactly proper moment for its attempted removal, but to attempt that removal itself finally with the utmost care and attention, operative skill and judgment being of course assumed as an essential for an undertaking such as this; otherwise the attempt here, however made, is apt to be fraught with the gravest danger.

In the present instance, a light spray of cocaine solution having first been applied to anesthetize the superficial tissues of the larynx, the patient was instructed as to her own part in the purposed procedure. She was directed, on the word, to take a slow, very deep and forced inspiration; and then at the words "Say 'A!'" (not "Ah!"), to attempt to phonate that vowel. She was directed to prolong this sound, "A!," however much it might tax her to do so at the end of her breath, until I should give her the command, "Breathe!"; when she was to take a sudden, quick, full breath. Having demonstrated this on myself several times to her entire comprehension, I introduced the laryngeal mirror and the Fauvel forceps, which I show you here. Passing the forceps at the proper moment behind the cockle-burr, the blades were gently separated, and the body of the cockle-burr was seized firmly just as the patient responded to the command to "Say 'A!'" It was held immovably, as the urgent command was loudly repeated again and again to "Keep on saying 'A!'" — until I saw that she was growing desperate for "air:" when I gave her the order, "Breathe!"

The larynx at once relaxed into the position of forced inspiration; and as it did so, a slight wig-wag motion of the forceps instantly brought away the entire cockle-burr, without wounding any of the laryngeal tissues. The patient forthwith returned home with her physician, who subsequently reported her prompt and uneventful recovery.

While, without due observance of essential details, this method might of course be open to objection as fraught with the gravest danger, it is believed that in competent and careful hands it may prove a satisfactory solution to the practical problem presented by the condition under consideration — a condition which of itself is at best doubtless of equal, if not greater danger.

3894 Washington Boulevard.



## STOMACH MANIFESTATIONS, WITH TWO CASE REPORTS\*

H. C. CROWELL, M.D.  
KANSAS CITY, MO.

If no remarkable feature presents in case reports, they may serve to fix in our minds certain facts and conditions that shall prove of benefit in reaching a diagnosis or presenting the treatment. With such a conception I have essayed to present at this time two case reports that especially point to the care necessary in pronouncing on stomach manifestations.

Case 1.—Mrs. C.; Swede; 36 years of age; married; never pregnant; is well nourished, but comes representing a class now recognized as not rare. Her main symptom is an excessive belching without vomiting, attended with some pain and a dragging sensation in the lower abdomen. She had had what proved to be, I judge, an exploratory operation about a year previous to my seeing her, which was in October last. At that operation, so far as she knew and was told, nothing was removed, the extent of the adhesions being ascribed as the reason for not doing anything. The suffering and annoyance continuing, she desired relief. My diagnosis was, probable adhesions of the omentum in the pelvis or to the old cicatrix of previous operation, dragging upon the stomach and duodenum, together with tubal or cystic growth posterior to the uterus. There was some tenderness in the region of the appendix. At the operation the omentum was found to be free from adhesions nor were there any intestinal adhesions save in the pelvis, but the appendix, unusually long, was firmly bound down at the distal extremity deep in the pelvis, dragging perceptibly upon the cecum. Behind the uterus was an inflammatory cyst of the right ovary and tube. The left tube seemed to be absent, either congenital or possibly the stump of removal at the previous operation, more likely the former, as there were no adhesions about it. The case made an uneventful recovery, with nearly complete relief of the belching. While before the operation she had been obliged to exercise care in her diet, she now was able to eat anything and showed marked improvement in her complexion and her every appearance.

This case is but one of a large number in which stomach or bowel trouble is the supposed site of the trouble, the appendix often not being suspected. While we have discussed appendicitis in all its various aspects, this relationship to chronic stomach disturbances is coming of late to be observed very frequently, even when no physical evidence of appendicitis is clearly apparent. These cases are grouped and often treated for a long time, if not for all time, as cases of dyspepsia, etc., and yet by test examinations yield no evidences of actual gastric disease. Such being the case, search should be made for causes existing, not in the stomach, but somewhere in the alimentary tract in the shape of angulations interfering with the peristalsis of the gut, adhesions, chronic, or perhaps an atrophied appendix. We might here properly suggest the propriety of looking for the etiologic factor in cases not yielding to ordinary symptomatic treatment. The *bête noire* of supposed indigestion in

quite a large number of cases to-day is to be found in obscure appendix disturbance or gall-bladder disease, either with or without stones, in either of which physical symptoms then presenting may be lacking as a positive sign or symptom on which we can predicate an opinion. In these cases particularly does a careful, well-taken history aid most of all. I have had my attention called to several recent cases of intestinal disturbance, as diarrhea or constipation, with associated indigestion, headaches, general malaise, indeed, all the manifestations of an auto-intoxication unrelieved by the ordinary medical means, at least but temporarily and that best by the administration of calomel. Complete relief has followed the removal of perhaps a small adherent appendix or gall-stones that had, to all intents, been latent, at least so considered, because of a failure to appreciate and note all symptoms that are indicative and that are present if appreciated. Given cases falling under this head, it must be apparent that the association of physician and surgeon would be expedient, and possibly an exploratory operation.

Case 2.—Since beginning the preparation of this paper, my attention was called to a case with impaction, which I saw in consultation some years ago. She had then been a semi-invalid for several years and still continues so, with the diagnosis of stomach trouble, whatever that may mean. Upon inquiry I find that no systematic examination of the stomach contents has been made to determine the motility or secretion. The cachexia or skin discolorization has been such that it has been suggested that she might have a beginning malignancy, which is not tenable as the same condition has existed for at least ten years. A course of calomel here is said to afford more relief than anything else, though all known remedies have been used tentatively.

To argue that there is not a discoverable etiologic factor would seem like begging the question. In order that this may be accomplished, we must, first of all, have the cooperation of the patient. In order to secure that, we must be able to satisfy the patient that we are working on definite if not direct means to reach such ends, and when we can satisfactorily eliminate the feeling that we are departing from the too common empirical observation, we can usually secure perfect acquiescence. We perhaps must admit that some yet balk when we reach the point of asking for an exploratory operation. Frequent demonstrations such as I have referred to, however, are now removing the fears of operative interference in those really anxious to get well. Neglect and empiric attention of these cases has served more than any other to drive many into "science" and other vagaries. The time has passed when it is to be considered good practice in cases presenting at least a chronic history, to hand them a prescription without availing ourselves of a complete analysis of stomach contents after having secured a careful history. The expense will be considered by many and declined so long as physicians are found who do not appreciate its need. In these cases I can see but imperfect results till physician and surgeon work together.

\* Read at the annual meeting of the Grand River Medical Society and Charlton County Medical Society, in joint session, Salisbury, Mo., March 14, 1912.

# THE JOURNAL

OF THE

## Missouri State Medical Association

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 Address all Communications to 3525 Pine Street, St. Louis, Mo.
 

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JUNE, 1912

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### EDITORIALS

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#### THE ANNUAL MEETING AT SEDALIA

The fifty-fifth annual meeting held at Sedalia, May 21-23, was well attended, there being 365 members registered. This number would have been much greater had the meeting occurred in a larger city, as a considerable number remained away on learning that the hotel accommodations were not adequate to care for the visitors in an acceptable manner. It seems likely that the day has passed when our annual sessions can be held in any but the larger cities.

The program was an attractive one, several of the papers being in the nature of new discoveries or results of research work, but a change of the order made after the program had been published caused much dissatisfaction and prevented the reading of some of the papers. The occasion emphasizes the importance of adhering strictly to the published program and the necessity of giving the preparation of the program the most careful and complete attention before making the final announcement. There was considerable discussion among the members concerning the division of the scientific work into sections, and many expressed the opinion that there should be more papers read in general session where specialist and general practitioner could meet on common ground, and less time devoted to section work. This is a subject for the new program committee to debate and discuss with members between now and the time for making up the 1913 program. The scientific work at the annual meetings is the most attractive portion of the program to the great majority of those attending, and the arrangement should be so ordered that the papers bearing on one subject should be read as nearly as possible in succession.

The election of officers resulted in the choice of Dr. Robert M. Funkhouser of St. Louis for president; vice-presidents, J. S. Wallace, Brunswick; H. S. Crawford, Harrisonville; J. N. Baskett, Hannibal; C. C. Conover, Kansas City; J. A. Timberman, Marston. Councilors: eighth district, L. W. Cape, Maplewood; thirteenth district, F. E. Murphy, Kansas City; twentieth district, F. J. Lutz, St. Louis; twenty-second district, G. S. Cannon, Fornfelt; twenty-third district, T. C. Allen, Bernie; twenty-fourth dis-

trict, J. B. Wright, Trenton; twenty-seventh district, J. H. Elliott, West Plains. Orator on Medicine, Dr. A. H. Hamel, St. Louis; Orator on Surgery, E. F. Yancey, Sedalia; secretary-editor, E. J. Goodwin, St. Louis; treasurer, J. Franklin Welch, Salisbury; member Committee on Public Policy and Legislation, Bert B. Parrish, Kirksville; Defense Committee, Joseph Grindon, W. B. Dorsett, R. E. Schlueter, St. Louis.

The invitation from St. Louis to meet in that city in 1913 was accepted, although St. Joseph made a strong bid for the honor.

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#### MAKE-BELIEVE PHILANTHROPISTS

The public mind is becoming better informed and more discriminating as regards the things that have to do with the cure and prevention of disease. The people are becoming better able to distinguish between bona fide therapeutics and that pseudotherapeutics which is really nothing but the rankest kind of corrupt commercialism under a different name.

This enlightenment of the people is largely due to the efforts which have been made by the local medical societies all over the country, the state medical organizations and the American Medical Association during the past eight or ten years, to give publicity to the facts as well as to the fancies of medicine: to the possibilities in health conservation and to the unattainable in the realm of the science that deals with the intricacies of disease and healing.

The days have passed when a Cagliostro can command the undivided attention of all classes of the people. Nowadays, when an impostor succeeds in the exploitation of a health fake his success is attributable more to the perverted curiosity of the people who give him their patronage than to their ignorance of the fundamental truths of hygiene and sanitation.

An illustration of the greater watchfulness of public officials in regard to the devices of the make-believe philanthropists as opposed to the aims and purposes of real medicine may be seen in the recent refusal of a referee in the circuit court at St. Louis to recommend the granting of a charter to an organization which purported to have for its object the establishment of an anti-tuberculosis sanatorium near St. Louis. The real purpose of the project, however, according to the referee, was simply to create a market for and advertise a "preparation" which its promoters had concocted for the treatment of consumption.

The organizers of this enterprise are two physicians, one of whom had his license temporarily revoked several years ago for irregularities in practice, an advertising solicitor and a cigar dealer.



Through the watchfulness of the referee, no doubt induced by the propaganda for reform in medicine and the care of the sick generally, St. Louis has escaped the stigma of having one more fake institution foisted on her citizens.

### THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

The *Bulletin* of the American Medical Association for January 15, contains a summary of the work of the Council on Health and Public Instruction.

The activities of the Council are already showing splendid results in regard to enlightening the public on the real purposes and objects of the organized medical profession. The ready acceptance by the newspapers of the press bulletins issued by the Council shows a healthy desire on the part of the press to receive reliable information on matters that affect the health of the people. Many newspapers use the bulletins as editorial matter and almost all the papers to which copies are sent publish some of the articles.

The lecture bureau of the Council is also demonstrating its usefulness. At present the Council is accumulating experience and developing its plans for the future extension of this work. Since the inauguration of the lecture bureau a number of speakers have been sent to various parts of the country to address public meetings held under the auspices of the local county society; in a little while this endeavor will grow into one of the most effective agencies of the organization for the instruction of the people on health topics and the enlightenment of the profession on the work of the Association. Considering the short period of time the Council on Health has had for formulating its plans since its organization the work already done speaks loud for the aptitude and effectiveness of Dr. Favill, the chairman, and his associates, to direct the work along lines that will produce the greatest amount of good for the profession and for the people. We urge our members to familiarize themselves with the work of this important branch of the American Medical Association. Dr. F. R. Green, secretary of the Council, will promptly respond to any request for information.

### COUNTRY USES LESS QUININ

Figures compiled by the Bureau of Statistics of the Department of Commerce and Labor bring to light an interesting fact regarding the sale of quinin.

It is shown by these figures that the price of quinin was approximately \$2 an ounce in 1882 but has steadily dropped in subsequent years until it is now but 15 cents an ounce. The decrease in

quinin imports has also shown a correspondingly surprising rapid decline. This decline is attributed to a variety of causes chief among which are the improvements in sanitation and drainage throughout the country resulting in a decreased prevalence of malarial fevers, for which quinin has long been considered the only reliable specific, and other conditions superinduced by malaria.

### NEW TREATMENT FOR RHEUMATISM

For the past three years Dr. A. F. Schafer of Bakersfield, Cal., has been studying the use of mixed vaccine therapy in rheumatisms. He has now perfected a preparation under the name of phylacogen which, from clinical reports, appears to be of value in various rheumatic conditions, especially in the acute, subacute and to some extent in the chronic types.

Schafer regards the remedy as a modified vaccine and as such it should at least command our attention since so much study is now being given to the development of serums and vaccines in the treatment of various types of infectious diseases.

In the series of cases reported by Crandall in this issue<sup>1</sup> phylacogen was the only antirheumatic remedy used. The clinical results from this series in the St. Louis City Hospital seem to support Schafer's conclusions.

If further reports on this remedy are equally favorable we may have added to our vaccine remedies one which will materially aid us in the treatment of rheumatic affections, and to a great degree avert the chronic joint involvements and dangerous heart complications that are such common concomitants of rheumatic conditions at present.

### HABITINA MAKERS CONDEMNED

The proprietors of a dangerous fraud, Habitina, a so-called cure for the morphin habit, recently received well-deserved punishment when R. C. Prewitt, M.D., and R. C. Bruce, constituting the Delta Chemical Co., in St. Louis, were each fined \$2,000 and sentenced to five years' imprisonment in a United States prison, having been found guilty of sending poison through the mails and using the mails for purposes of fraud.

Habitina was represented as being a cure for morphin habitués, and contained not only morphin in large quantity but two other habit-forming drugs besides. Its proprietors made the claim that morphin users could cure themselves through the medium of this "cure." It has been demonstrated many times that one who is addicted to the use of morphin cannot cure himself.

The government officials deserve great credit for the splendid work in the prosecution of this case and it is earnestly hoped that the punish-

ment of others who are engaged in like traffic may be pursued.

Dr. Prewitt made several futile attempts at one time to gain membership in the St. Louis Medical Society, though the matter never actually came to a vote. It may be well here to remark that sponsors for members in component societies cannot be too careful as to the kind of men they assume responsibility for and whose fitness they guarantee by their recommendations.

### TRAU, SCHAU, WEM

While the above may look like a quotation from the bill of fare of a chop suey house, it is a homely German proverb and means "look whom you trust." It is a proverb which physicians should have in mind when they are tempted to give consideration to the advertising matter or to the detail men of proprietary medicine houses. As a business house would scout a request to cash a check presented by an unknown individual, so physicians should refuse to pay attention to the claims made by firms of unknown standing for their proprietary medicines. Still more should they refuse to pay heed to any preparations put out by a firm which has once been shown to be unreliable, as much as a commercial concern would quickly and positively refuse to cash the draft of one whose paper has been found to be worthless.

The above thoughts are suggested by an inquiry concerning the value of phytoline, put out by the Walker Pharmacal Company. A report of the A. M. A. Chemical Laboratory on *hymosa* (*Jour. Am. Med. Assn.*, June 11, 1910), exploited by the Walker Pharmacal Company, shows that this firm puts out nostrums of the worst class, namely, the kind whose composition is falsely declared. In view of this it would appear to be the height of folly to give consideration to phytoline or any other product put out by this firm.

### GOVERNMENT MEAT INSPECTION CHALLENGED

What may prove to be a more formidable arraignment of the federal Department of Agriculture than the pure food imbroglio which culminated in Dr. Wiley's retirement from the Bureau of Chemistry, because he felt he could fight better for the public health outside than in; a more searching exposure of practices in meat-making than was revealed in *The Jungle*; and may lead to more basic results in the cause of public health than any other development of the year, is bound up in a resolution introduced by Congressman John M. Nelson on April 24 calling for an investigation by the committee on expenditures in the Department of Agriculture.

It will be remembered that following Upton Sinclair's exposure of conditions in the large packing houses, Congress, in 1906, enacted a new meat inspection law designed to protect the health of consumers of meats and food products shipped in interstate trade and appropriated \$3,000,000 annually for its strict enforcement. The basis of the present action is an investigation going back several years carried on as a private citizen by the Rev. Caroline Bartlett Crane of Kalamazoo, Mich. She charges that notwithstanding the fact that the Agricultural Department's standards for animals and carcasses passed for human food prior to 1906 were too low, they have been "so lowered since as to render insignificant the unquestioned improvements in packing house sanitation wrought as the result of the new law"; moreover, that not only do the "American people consume meats from diseased animals unwarrantably passed for food in this country but also meat food products which by official instructions are not certified for foreign trade because European countries have refused to accept them."

In detail, the resolution charges the secretary of agriculture and the chief of the Bureau of Animal Industry, A. D. Melvin, with "nullifying both the letter and intent of the meat inspection law"; that the bureau stamp "U. S. inspected and passed" cannot safely be taken as a guaranty that products are "sound, healthful, wholesome and fit for human food"; that beef and pork packing establishments have been guilty of grave violations of both the federal meat inspection law and the department regulations, that while the department has had full cognizance of these facts, "no prosecution or threats of prosecution were made nor effective measures taken to prevent the continuance of such violations of law, and on the contrary, Secretary Wilson and Solicitor George P. McCabe have made public statements to the effect that there had been no violations of the law by the packers"; that a lowering of inspection standards and practices has been accomplished by secret "service announcements" not intended for the public, accompanied by warnings that employees showing or giving them to the press would be "severely dealt with"; and that this lowering of standards and practices of inspection has been brought about by the direct and demonstrable influence of packers and of the American Meat Packers' Association. The resolutions call attention to the fact that:

The Department of Agriculture, in addition to the permanent annual appropriation of three million dollars, is now asking for one million dollars for the microscopic inspection of a part of the pork product, the reason assigned being that "several deaths have resulted from eating such products which contained trichinae," and that "the Swiss minister is now seeking reparation on account of the deaths and serious illness of several citizens of Switzerland."



Finally it is charged that the permanent annual appropriation to the department is being "perverted from its intended purpose of protecting the public health to the promotion of the business interests of the pork and beef factories."—*The Survey*.

## CORRESPONDENCE

### TUBERCULOSIS FIGHT

JEFFERSON CITY, Mo., May 4, 1912.

*To the Editor:*—Thinking that you were more or less interested in everything pertaining to health matters, I wish to call your attention to the fight Jefferson City is making against the White Plague.

Some two months ago we brought the matter before our Commercial Club and asked for funds to carry on a crusade. They took the matter up and through the newspapers asked for contributions to carry on the work. Twelve hundred dollars were voluntarily sent in, in a few days. We immediately employed a visiting nurse and put her to work. She has been on the job now for a little over a month and the good she has accomplished has been a revelation. She has about thirty-five patients on her visiting list, whose condition she has greatly benefited. We are flooding the town with literature, furnishing consumptives with sputum cups, sanitary napkins and in some cases with food. We hope by the end of the year to have no unwatched case of tuberculosis in Jefferson City.

Yours very truly

W. A. CLARK, M.D.

### MATAS OPERATION

SPRINGFIELD, Mo., May 15, 1912.

*To the Editor:*—I see on page 439 of THE JOURNAL a faithfully printed report of the Matas operation done and reported by me: also note that I did not sign my name and give address, which was, of course, an oversight on my part.

Very respectfully,

B. F. FORTNER.

## NEWS NOTES

DR. F. H. BROYLES of Bethany has been reelected city physician.

DR. M. H. EADS of New Hampton, Harrison County, will soon move to Texas.

DR. A. B. FREEMAN of Joplin has been appointed a member of the city library board.

DR. DANIEL MORTON of St. Joseph delivered a lecture on "Preventive Medicine" to the students at the State Normal School in Maryville, May 8.

DR. J. H. MORROWAY of Ridgeway has announced his candidacy for the nomination of congressman from the Third District on the Republican ticket.

DR. T. H. DUCKETT, present representative of Barton County, is being urged to stand for the nomination again, and it is believed that he will. It is admitted that he made an honest, faithful and efficient representative.

A NUMBER of physicians who were former students of medicine under the guidance of Dr. A. W. McAlester of Columbia gave a dinner in honor of their teacher at Columbia, during the meeting of the Boone County Medical Society, March 21.

DR. J. G. WILSON of Atkins, Harrison County, has purchased the store and office of Dr. Eads and will move to New Hampton. By the removal of Dr. Eads, Harrison County loses one of its most energetic and faithful members, but Texas will profit through our loss.

DR. C. S. WILSON of Kirksville, secretary of the North Missouri Medical Association, was married at Lamar, April 29, to Miss Shibley, daughter of Dr. and Mrs. Shibley, now of Lamar, but who will shortly remove to their old home at Green City, Mo. Dr. Wilson formerly practiced medicine at Green City.

THE Southwest Missouri Medical Association met at Springfield, May 9 and 10, with seventy-five members present. The proceedings will appear in the next issue of THE JOURNAL. The following officers were elected: Dr. T. A. Coffelt of Springfield, president; Dr. A. H. Madry of Aurora and Dr. W. H. Beatie of Marshfield, vice-presidents. Dr. H. A. Hill of Springfield, secretary.

THE Southeast Missouri Medical Association met at Farmington, May 8-10. About sixty-five members were present. We hope to publish a report of this meeting in the next issue. Officers for 1912 are: Dr. W. S. Hutton, Farmington, president; Dr. D. R. Downing, Farmington, vice-president; Dr. F. L. Findley of Aniston, recording secretary; Dr. G. S. Cannon of Farnfeld, sec-

retary; Dr. W. R. Goodykootz of Caledonia, treasurer.

THE North Missouri Medical Association will meet at Kirksville for its semi-annual session, June 20. A cordial invitation is extended to all members of the State Association to attend this meeting. Those who may desire to read papers should address Dr. C. S. Wilson, corresponding secretary, Kirksville. The other officers of the association are Dr. J. S. Lyter, Moberly, president; Dr. E. M. Gilford, Monroe City, secretary.

SINCE March 26 the following articles have been accepted for inclusion with New and Non-official Remedies:

L-Suprarenin Synthetic Bitartrate Tablets (V. Koechl & Co.).

Colon Vaccine (Parke, Davis & Co.).

Gonorrheal Vaccine (Combined) (Parke, Davis & Co.).

Typhoid Vaccine (Prophylactic) (Parke, Davis & Co.).

Furunculosis Vaccine (Parke, Davis & Co.).  
Combined Bacterial Vaccine (Parke, Davis & Co.).

Acne Vaccine (Parke, Davis & Co.).

Novocain Tablets "D" (Victor Koechl & Co.).

Novocain Tablets "F" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "A" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "B" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "C" (Victor Koechl & Co.).

Novocain Suprarenin Tablets "E" (Victor Koechl & Co.).

Proferrin (H. K. Mulford Co.).

Proferrin Tablets 1 gr. (H. K. Mulford Co.)

Proferrin Tablets 2½ gr. (H. K. Mulford Co.),

Proferrin Tablets 5 gr. (H. K. Mulford Co.).

Meningo-Bacterin (H. K. Mulford Co.).

Tyramine (Burroughs, Wellcome & Co.).

Tuberculin-Rosenbach (Kalle & Co.).

## DEATHS

### EDMUND A. DONELAN, M.D.

Dr. Edmund A. Donelan, a graduate of the Ohio Medical College in 1852, and for many years a practitioner in St. Joseph, died at his home in that city, May 10, aged 88 years. Until quite recently he had been actively identified with the organized profession and was a leading spirit in every undertaking approved by the county society, but after more than fifty years in active practice he retired to a well-earned rest and became an honorary member of his society.

The following resolutions were adopted by the St. Joseph-Buchanan-Andrew County Medical Society:

Another warrior sinks to rest and folds his weary hands to sleep;  
The deeds that he hath done attest how pure his motives were and deep.  
Not his the pomp of sword and drum, or bugle pealing notes of strife,  
For though he strove to overcome, he sought not death to bring, but life.

He rests at last, yet not as one whose toil for selfish ends is o'er;  
He passes like the setting sun, in farther region to explore;  
He rests indeed, yet not with grief should we his hallow'd bier surround.  
He falls not as the falling leaf, but as the seed in mellow ground.

We yield him Nature's tear and sigh, but grief before our faith recedes;  
The true physician does not die; he lives in comrades' hearts and deeds;  
His dauntless soul no fears appall, he knows how frail is human breath;  
So, one by one her warriors fall, yet Life is victor over Death.

This beautiful apostrophe of the Life beyond the grave, is from the pen of Dr. R. H. G. Osborne, of Morristown, Pa. The poem was dedicated to Dr. J. H. Musser, another gallant hero who recently laid down his life in the service. To those of us who knew Dr. Donelan intimately, the tender sentiments expressed in this poem appeal with touching significance. Each line and symbol seem to have been especially penned to eulogize the acts of kindness that filled our brother's long and purposeful life, and we each one bow the head and say Amen to this beautiful thought,

"The true physician does not die; he lives in comrades' hearts and deeds."

Reclining in the easy chair that four years ago had been presented to him by this society, Dr. Donelan, Nestor of the St. Joseph medical profession, passed peacefully into his eternal rest at daybreak on Friday, May 10, aged 88 years. Dr. Donelan for more than fifty years had practiced medicine in the West; he was a typical specimen of the rugged pioneer doctor who blazes the way for his successors. Many young men owe their success in life to Dr. Donelan's teaching and sound advice. He was a friend to the struggling young doctor, as many of the members of our society will testify. His was a character fit for emulation; unselfish, kind, and charitable; his ideals were lofty, his impulses noble, his inspirations true. He was ambitious for worthy causes, and labored untiringly for the advancement of the best interests of the community in which he lived; his work along sanitary and educational lines; his activity in medical societies; his effective services in the State legislature; his devotion to his chosen profession—all exemplifying Dr. Donelan's supreme desire to benefit humanity, increase happiness and make his city a better place to live in. No duty was ever too onerous, no task too hard for this noble practitioner of medicine, whom we all learned to love and revere, and who is now so sorely missed from our ranks.

To the sorrowing relatives and friends we the members of this society extend our heartfelt sympathy and condolence in this time of bereavement, but we offer them as a consoling thought, the words of the immortal poet, "There is no death!"

Transition but marks the beginning of a new and happier life.

St. Joseph-Buchanan-Andrew County Medical Society.

JACOB GEIGER,

CHAS. WOOD FASSETT,

F. H. LADD,

Committee.



### SAMUEL FRITZ KESSLER, M.D.

Dr. Samuel F. Kessler, a member of the Buchanan County Medical Society, the State Medical and the American Medical association, died at his home in St. Joseph, April 15, aged 49. Dr. Kessler graduated from the Jefferson Medical College in 1889 and was professor of anatomy in the Ensworth Medical College. The college adopted the following resolutions in memory of their colleague:

"There are heroes who fall 'mid the carnage of battle,  
There are those who meet death on the foam—  
But greater are those who, unheralded, battle  
With Fate for the loved ones at home!"

WHEREAS, The all-wise Creator and Great Physician has called to his reward our beloved colleague, Dr. Samuel F. Kessler; and

WHEREAS, The life of our co-worker and brother physician has been one unselfishly devoted to his profession, and to the teaching of its principles; and

WHEREAS, His untimely demise will leave an unfilled niche in our faculty, as well as in the hearts of his many friends, who admired his beautiful traits of character; therefore, be it

*Resolved*, That the faculty of the Ensworth Medical College, with whom he was for so many years identified, deeply deplores his loss, and sincerely sympathizes with the bereaved family. Be it

*Resolved*, That a copy of these resolutions be spread upon the minutes, and copies sent to the relatives.

JAS. W. HEDDENS, President.

JACOB GEIGER, Dean.

T. E. POTTER, Secretary.

### A TRIBUTE TO DR. N. F. TERRY DIED IN SPRINGFIELD, MO., APRIL 17, 1912

By D. U. SHERMAN, M.D.

President Greene County Medical Society

Dr. Norman F. Terry, president of the Springfield Hospital Association and leading surgeon of southwest Missouri, in the prime of life and in the fulness of manhood, was suddenly stricken. A man seldom lives to complete the work he starts to do in youth, but if he erect one stone on which the succeeding generation may gradually build the perfected structure, he has not lived in vain. Dr. Terry lived a progressive life and reached an early end. When the record is finally written it will doubtless be determined that he did the work laid out for him to do and did it well. His was the spirit of a pioneer, not content with things that had been done, but ever restless to find new vistas with new horizons, his single-hearted devotion to the development of what is best in medicine and surgery led him to engage in a constant warfare of ideas, no matter whether the ideas were those of his colleagues or of his own; no matter whether he was right or wrong, his energy gave life to the subject and set men to thinking. It is such active lives as his that keep subjects alive, keep men aroused, and lead them to their utmost, and when this is

for no selfish end, but solely in the interest of humanity, we have a public benefactor whose usefulness exceeds that of the capitalist who gives his million dollars to the most worthy charity.

Dr. Terry had a wide circle of friends among the medical men and the laymen as well. There is not a hamlet or town in southwest Missouri where he was not loved for some good deed he had done. He had for a number of years devoted his entire time to surgery, and was one whose opinion was sought by those who needed the advice he was so competent to give. His extensive practice as surgeon coupled with his intelligence and great good sense made his opinion extremely valuable as an expert, and he was frequently called on in this capacity.

Dr. Terry's greatest interest was the Springfield Hospital and Training School. He worked along the line of developing the surgical department of which he was head. He lived to see this department and the rest of the institution rank with the best of its kind in the country, happy in the knowledge that he was an important factor in its success. The good his work in this particular has done humanity is in itself alone evidence of the value of his life to the community. Dr. Terry was the sincerest of friends, loyal almost to the point of weakness; generous to a fault, all that he had was yours for the asking.

Dr. Terry has been taken from the home, from the profession and from the world, before his activities reached their zenith, but the influence of such a life as his will last beyond the lives of those who felt his influence, and we his colleagues sorrowing in our loss exult in the privilege we had in knowing him.

To his wife the sympathy of every member of the profession goes out in the fullest measure.

## THE TRUTH ABOUT MEDICINES

This department presents, in concise form facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Non-official Remedies." Under "Reform in Medicines" appear matters, tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 Dearborn Avenue, Chicago.

### RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Non-official Remedies."

PROFERRIN is a compound of iron and milk casein. It is tasteless, insoluble in water and dilute acids, slowly soluble in alkalis. It is used as a ferruginous tonic. It undergoes very little change in the stomach but is said to be quickly digested and absorbed in the

intestine. Its hematogenous actions resemble those of other organic iron preparations. Dose, .13 to .3 gm. (2 to 5 grains). It is also marketed in the form of tablets each containing, respectively, 0.065 gm. (1 grain), 0.15 gm. (2½ grains) and 0.3 gm. (5 grains). H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, May 4, 1912, p. 1356).

TYRAMINE is para-hydroxy-phenyl-ethyl-amine hydrochlorid  $\text{OH} \cdot \text{C}_6\text{H}_4 \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{NH}_2 \cdot \text{HCl}$ , the hydrochlorid of synthetically prepared para-hydroxy-phenyl-ethyl-amine. Taken internally or injected subcutaneously tyramine increases the blood-pressure; it is also claimed to be valuable for producing post-partum contraction of the uterus. The action is similar to epinephrin, being weaker and slower, but lasting longer. It is marketed in the form of hypodermic tablets (Tabloid Tyramine Hypodermic) each containing 0.02 gm. (½ grain). Burroughs Wellcome & Co., New York (*Jour. A. M. A.*, May 4, 1912, p. 1356).

TUBERCULIN-ROSENBACH is an "old tuberculin" modified by growing in a culture with *Trichophyton holoserium album*. It is claimed to be less toxic but more efficient than other forms of tuberculin. The validity of these claims is not fully confirmed. Kalle & Co., New York (*Jour. A. M. A.*, May 4, 1912, p. 1356).

#### PHARMACEUTICAL PREPARATIONS OF ACCEPTED ARTICLES:

Novocain Tablets "D" each containing novocain 0.2 gm. (3 grains).

Novocain Tablets "F" each containing novocain 0.05 gm. (3-4 grain).

Novocain Suprarenin Tablets "A" each containing novocain 0.125 gm. (2 grains) and suprarenin 0.000125 gm. (1-500 grain).

Novocain Suprarenin Tablets "B" each containing novocain 0.1 gm. (1½ grain) and suprarenin 0.00025 gm. (1-250 grain).

Novocain Suprarenin Tablets "C" each containing novocain 0.05 gm. (3-4 grain) and suprarenin 0.000083 gm. (1-1000 grain).

Novocain Suprarenin Tablets "E" each containing novocain 0.02 gm. (½ grain) and suprarenin 0.00005 gm. (1-1200 grain) (*Jour. A. M. A.*, May 4, 1912, p. 1356).

CRESATIN is meta-cresyl acetate,  $\text{CH}_3 \cdot \text{C}_6\text{H}_4 \cdot \text{O}(\text{CH}_3 \cdot \text{CO})$ , the acetic acid ester of meta-cresol. It is said to be antiseptic and analgesic and is recommended for use in the treatment of affections of the nose, throat and ear, such as follicular tonsillitis, nasal suppuration due to ethmoidal diseases, atrophic nasopharyngeal catarrhs, furunculosis of the external auditory canal and purulent otitis media. Schieffelin & Co., New York (*Jour. A. M. A.*, May 25, 1912, p. 1582).

#### REFORM IN MEDICINES

THE SARSAPARILLA ABSURDITY.—Sarsaparilla is an almost universal constituent of "blood purifiers" (whatever that may mean). Preparations of it are also official in our Pharmacopeia. The fact that the drug is almost never used alone, but is almost always combined with something more active such as potassium iodid, shows that no one places any dependence on it. The Pharmacopeia should be purged of sarsaparilla and its preparations, if it is to continue to enjoy its own self-respect (*Jour. A. M. A.*, May 4, 1912, p. 1356).

THERAPEUTIC RESEARCH.—Torald Sollmann, chairman of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry, discusses the need of more exact knowledge regarding the action of drugs. He outlines the plans whereby the Council hopes to aid therapeutic research. The following are

some of the problems now being investigated: The clinical value of cardiovascular drugs, relative efficiency and toleration of natural and synthetic salicylates. Duration of action and absorption of Digitalis bodies. Efficiency of intestinal antiseptics, therapeutics of phosphorus compounds, standardization of antiseptics and germicides, pharmacology of commercial vanadium preparations, effects of origin and impurities on toxicity of chloroform, and fate, efficiency and side actions of organic iodids (*Jour. A. M. A.*, May 4, 1912, p. 1390).

ALCOLA.—This "cure for drunkenness," consisting of three kinds of tablets, was examined in the Association Chemical Laboratory. Tablets No. 1 contain caffeine, about ¼ grain and strychnin, nearly 1-50 grain. Tablets No. 2 contain strychnin, about 1-100 grain. Tablets No. 3 contain about ½ grain tartar emetic. While this is a full dose of tartar emetic, the directions suggest that as many as 3 or 4 tablets may be taken without harm. Alcola is exploited by the Physicians Cooperative Association of Chicago which also sells Re-Ves-To, claimed to cure rheumatism, kidney disease, liver and bladder trouble (*Jour. A. M. A.*, May 4, 1912, p. 1390).

PANTOPON DETOXICATED.—Pantopon is said to consist of the hydrochlorids of the several alkaloids naturally occurring in opium. Containing 50 per cent. of morphin it has the disadvantages of morphin though this seems to have been largely overlooked by those who write in favor of it. H. Winternitz having found that in a case of tabetic crisis the morphin in Pantopon produced the same dangerous depression of the respiration as morphin when it was not in Pantopon got the manufacturers to demorphinize Pantopon. This new proprietary, which may be likened to the play of Hamlet with Hamlet left out, is called "Opon," the name being derived from Pantopon by cutting off the "pant" (*Jour. A. M. A.*, May 11, 1912, p. 1461).

THE COMPOSITION OF NOSTRUMS.—Incidental to the prosecutions under the Food and Drugs Act the Federal Government is making known the composition of nostrums. St. James Society Drug Cure is sent out in a series of bottles labeled 1 to 10 which contain a mixture of morphin and alcohol. Gauvin's Aniseed Syrup, a "baby-killer," was found to be a watery-alcoholic solution of morphin acetate sweetened with sugar and flavored with oil of anise. Brant's Soothing Balm was found to consist of camphor and oleoresin of capsicum dissolved in alcohol and containing a trace of sassafras oil and water. Tilden's Febrisol, The Tilden Company, New Lebanon, N. Y., a proprietary nostrum exploited to physicians, was found to contain, besides certain unidentified drugs: alcohol, glycerin, acetanilid, acetphenetidin, caffeine and salol (*Jour. A. M. A.*, May 11, 1912, p. 1461).

EFFECT OF HYDROLYSIS ON GERMICIDAL ACTION.—Fuchsin acetate has germicidal properties while fuchsin sulphate and fuchsin chlorid are devoid of germicidal effects. This is probably because fuchsin acetate is decomposed by water (hydrolyzed) to yield the base fuchsin while the sulphate and chlorid are not so decomposed. In this way decomposition by water (hydrolysis) is responsible for the germicidal power of fuchsin in fuchsin acetate, commonly called "basic fuchsin" (*Jour. A. M. A.*, May 11, 1912, p. 1465).

THE RAMIFICATIONS OF QUACKERY.—Last November many physicians received a request from a physician in central New York for the names of those afflicted with locomotor ataxia. Decoy letters brought replies containing testimonials relative to a "wonderful" serum treatment for locomotor ataxia by a Dr. C. H. Burton of Detroit, Mich. Burton was formerly associated with "Drs. Mixer" whose cancer-cure fake was made the



subject of a fraud order as well as a prosecution under the Food and Drugs Act. In a post-office investigation, relative the Mixer fraud order, Mixer's congressional sympathizers appeared to be willing to accept the testimony of Dr. Burton to the effect that Mixer's nostrum would cure cancer despite the contrary testimony of Anders of Philadelphia, Carl Beck of New York, Deaver of Philadelphia, Kelly of Baltimore, Mayo of Rochester, Murphy of Chicago, Osborne of New Haven, and many other equally well-known physicians and surgeons (*Jour. A. M. A.*, May 18, 1912, p. 1517).

**WINSLOW'S SOOTHING SYRUP.**—While in this country the morphin content of medicines must be declared on the label, in England such labels contain the additional warning of "Poison." This requirement evidently decreased the sale of Winslow's Soothing Syrup in England and the product now sold there contains no morphin, potassium bromid having been substituted for the opiate as shown by analysis: potassium bromid, 2.0 per cent.; alcohol, 4.3 per cent. by measure; essential oil (anise) about 0.1 per cent. and sugar, 56.5 per cent. (*Jour. A. M. A.*, May 18, 1912, p. 1524).

**SAL HEPATICA.**—According to the *Druggists Circular* the composition is: sodium chlorid, 13.05 parts; sodium sulphate, 26.27 parts; sodium phosphate, 29.80 parts; sodium bicarbonate, 18.0 parts; lithium phosphate, 0.04 parts; citric acid and tartaric acid, to make 100 parts (*Jour. A. M. A.*, May 18, 1912, p. 1527).

**ORGANIC AND INORGANIC PHOSPHORUS COMPOUNDS.**—The alleged unique value of so-called "organic" phosphorus compounds in nutrition is being seriously questioned. Fingerling has published experiments which deal with the relative availability of various organic and inorganic phosphorus compounds—lecithin, phytin, nucleoprotein, casein, nucleic acid and disodium phosphate—in the production of milk. Experimenting on goats the materials to be tested were added to a ration already deficient in phosphorus, thus giving every opportunity for special advantages to manifest themselves. It was found that none of the substances exerted any specific influence whatever on the activity of the mammary glands. Neither the quantity of milk nor its individual constituents were increased. Thus we have another proof that the animal organism can satisfy its need of phosphorus adequately by means of inorganic phosphates (*Jour. A. M. A.*, May 25, 1912, p. 1605).

**SWAMP ROOT, THE FRAUD ABOVE THE LAW.**—Analysis by the government chemists showed Kilmer's Swamp Root to be a syrupy liquid containing 8.55 per cent. alcohol by volume and 43.3 per cent. total solids including 42.6 per cent. sugars with a small amount of an aromatic balsam and a laxative principle. There was also present wintergreen, juniper and cardamon. Samuel Hopkins Adams in *Collier's Weekly* exposes the worthlessness of and the false claims made for this nostrum and discusses the means whereby it has gained immunity from prosecution. In conclusion it is emphasized that Swamp Root will not and cannot cure kidney, liver or bladder disease as claimed; that used in such diseases, it will often be harmful; and that it may sometimes even kill. It is suggested that the way to end Swamp Root's career of fraud is to spread understanding of what it really is: a compound of false promises and harmful drugs, protected by political pull, and backed up by a conscienceless newspaper; in all the realm of medical knavery, the most dangerous and law-destroying combination extant—the copartnership of quackery, blood-money, and fraud-natured journalism (*Jour. A. M. A.*, May 25, 1912, p. 1616).

## SOCIETY PROCEEDINGS

### ADAIR COUNTY MEDICAL SOCIETY

#### MEETING OF MARCH 14

The regular meeting of the society was called to order in the office of Dr. E. S. Quinn at 7:30 p. m., March 7. President Dr. J. L. Martin in the chair.

Dr. Quinn presented a patient, a woman at six months gestation with an excessive abdominal enlargement for that period, and the absence of fetal movement, also absence of fetal heart beat. After a general examination of the case the members concluded that it was a case of hydramnus with dead fetus.

Dr. Gashwiler presented a male, 42 years of age with frequent desire to urinate, nocturnal enuresis and a sensation of impending micturition in or during the act of copulation. Drs. Callison, B. B. Parrish and Montgomery were asked by the chair to examine this case and report. They reported slight enlargement of the prostate but not sufficient for the symptoms and concluded it to be neurasthenia sexualis.

Dr. Gashwiler read a paper on the "Control and Prevention of Tuberculosis." Dr. Hanks, of Brashear, the Councilor for this district, discussed the subject at length and approved the author's fresh air views.

Dr. E. C. Callison read a paper on "Cerebrospinal Meningitis." This paper was read at the request of the society as a case of this dread malady had been reported at our previous meeting. Being a live subject the discussion was general and only limited by time.

Dr. Hanks moved that the papers be stripped of their medical verbiage, the authors names be cut off and that they be given to the lay press for publication in the name of the Adair County Medical Society. Carried.

All the members of the society were present and Dr. Montgomery of Milan, Sullivan County, was a welcome visitor and gave some valuable points on the introduction of the needle in spinal puncture.

We are proud of our condition and prosperity.

#### MEETING OF APRIL 4

The monthly meeting was called to order by the president, Dr. J. W. Martin, at the office of Dr. J. S. Gashwiler, in Novinger, at 11 a. m.

The essayist, Dr. James Hanks of Brashear, not being present, the routine business was taken up and completed, then adjournment was taken for dinner. The afternoon was taken up with clinics of various degrees of interest and complexity. Session adjourned to meet at the office of Dr. B. B. Parrish in Kirksville, on May 2.

#### MEETING OF MAY 2

The monthly meeting was called to order by the president at 7:45 a. m. A communication from Dr. E. J. Goodwin telling of a lecturer that would come gratis from the Barnard Free Skin and Cancer Hospital, St. Louis, if we would furnish a hall for the meeting, was read and favorably acted on.

A clinic of a little girl 8 years of age was then presented and after the members had examined her the opinion was expressed that there was a mixed infection of tuberculosis and congenital lues. A Moro tuberculin test will be used and the results reported.

Dr. B. B. Parrish then read an excellent paper on the "Origin and Results of Treatment with 606." He reviewed Ehrlich's experiments in the perfection of the product and reported ten cases treated with inter-muscular injections.

J. S. GASHWILER, M.D., Secretary.

### CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met in Kingston May 9, Dr. Smith, president, in the chair, and Dr. Brown, secretary pro tem. The following were present: Members: Drs. Smith, Brown, Shouse, Gartside, Mount, Carr, Duffie and Parrish; visitors: Drs. W. T. Reynolds and H. E. Thomison of Kansas City, and Dr. J. F. Hedrick of Nettleton, Mo.

Dr. I. N. Parrish was unanimously elected to membership in the society at this meeting.

The case which was submitted for diagnosis was taken up and discussed by all present; the diagnosis was reduced to either a cirrhosis of the liver or a carcinoma of the stomach, the preponderance of opinion favoring cirrhosis of the liver on account of the patient's drink habits. An exploratory operation proved it to be an inoperable carcinoma of the anterior stomach wall. The discussion of the case was very interesting.

Dr. Smith presented a clinical case for diagnosis: Patient, male, farmer, aged 62; declined from 160 pounds to 127 pounds in a period of three or four years; has been a moderate drinker of whiskey, not daily, but an occasional spree; chewed a great deal of tobacco but always hearty until four months ago when he had an attack of "grip" accompanied by sharp pain in the region of the stomach with weakness becoming prominent at this time; no vomiting; bowels constipated; lungs, heart and kidneys negative; leukocyte count, 13,000; hemoglobin 85 per cent; inspection of abdomen negative, and palpation rather unsatisfactory. Stomach appears to be low down when the patient stands and it was thought a mass could be felt in the region of the pylorus. History of sharp pains in the region of the stomach and extending through to the back, accompanied by fainting spells. The prevailing diagnosis was cancer of the stomach, and an exploratory operation was advised.

The subject for study, "Diseases of the Stomach," was considered, Dr. Brown leading; the anatomy, position and size of the stomach were discussed by all present.

Then the matter of the proposed fee bill was taken up and the secretary was instructed to write each member asking that the bill be subscribed to as the standard for the minimum charges for professional services.

"A copy of this fee bill has been furnished to each member, and I would suggest that in each community the members have a conference respecting this bill and agree on its adoption locally as it is now recommended by the society; or, if you think it should be amended, present your amendments at the next meeting for consideration. Please advise the secretary as to your acceptance or rejection of the measure."

The Caldwell County Medical Society was represented at the meeting of the State Medical Association in Sedalia May 21, 22, 23, by Dr. Tinsley Brown and wife, and your secretary and wife. The attendance at the meeting was not so large as was expected, there being about 375 members registered.

Hamilton, Mo., was chosen as the place of the next meeting for the county society, which will occur on Thursday, June 20. REMEMBER.

The program will be a continuation of "Diseases of the Stomach" with Dr. Brown as leader.

Members are requested to present clinical cases before the society when it is convenient.

Dr. Brown will probably submit another case history for diagnosis to be considered at the June meeting.

I would suggest that we meet early enough to dispose of the business before noon so that we may devote the afternoon to the scientific program.

Yours for a good meeting in Hamilton.

GEO. W. GOINS, M.D., Secretary.

### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

Cape Girardeau County Medical Society held its regular monthly meeting May 13 with the following members present: Drs. Hope, Howard, Schulz, St. Avit, Tarlton, Wichterich, Wilson and Yount. Visitor, Dr. Berry.

The application of Dr. Amos M. Murphy, of White-water, was approved by the board of censors, and the transfer cards of Drs. J. W. Berry from Callaway County and George Osborne from St. Louis County were balloted on and all elected to membership.

A communication from the State Association secretary was read concerning a lecturer on cancer for a public meeting. The secretary was instructed to obtain information as to when the lecture could be delivered so the society could make arrangements for its delivery.

The program consisted of papers on "Infantile Paralysis," by Dr. Wichterich; "Incontinence of Urine in Children," by Dr. Howard; "Dysmenorrhea," by Dr. Schulz; and "Acute Nasal Discharges in Children," by Dr. Yount. All were well received and good discussions followed the reading.

E. H. G. WILSON, M.D., Sec.

### CLINTON COUNTY MEDICAL SOCIETY

The second quarterly meeting of the Clinton County Medical Society was held in Lathrop Tuesday, April 30.

The following papers were read:

"Double Ectopic Gestation," by Dr. P. M. Steekman, of Plattsburg. A thorough discussion followed.

"Cerebrospinal Meningitis," by Dr. C. H. Risley, of Cameron. The discussion that followed was particularly interesting on account of the epidemic in this locality at this time.

Members present, Dr. C. H. Risley, president, Dr. M. L. Peters, Dr. J. Kimsey and Dr. A. W. Robertson.

The attendance was light on account of some members attending court.

M. L. PETERS, M.D., Sec. pro tem.

### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Osage-Maries-Gasconade County Medical Society held a stated meeting at Meta, Osage County, April 18, with twelve members present.

Dr. F. B. Hiller, secretary of State Board of Health; Dr. W. S. Allee, senator from this district, and Dr. W. A. Clark, Councilor of nineteenth district were



present and took part in the meeting. The afternoon was taken up with the reading and discussion of scientific papers and examinations of cases. A sumptuous dinner furnished by the local profession was served at six-thirty.

The night session was an open meeting and the hall was crowded with people. Dr. Hiller spoke on general health measures and the working of the vital statistics law. He gave the figures showing the death-rate from different diseases in the counties represented and was highly interesting. Senator Allee spoke on the need of retaining our present medical legislation, and as always made a very interesting talk. Dr. W. A. Clark spoke on tuberculosis and the work being done in Jefferson City. The meeting was highly interesting and the local members are to be congratulated on their enthusiasm.

#### JEFFERSON COUNTY MEDICAL SOCIETY

The Jefferson County Medical Association met at Festus on April 27, with all the officers present, and the following business was transacted.

Officers for the following year were elected as follows: Dr. I. N. McNutt, Pevely, president; Dr. N. R. Donnell, vice-president; Dr. O. E. Hensley, Pevely, secretary and treasurer.

The name of Dr. R. E. Donnell, of DeSoto, was presented for delegate to the State Medical Association at Sedalia, and he was elected and the secretary ordered to furnish him with the proper credentials.

Applications of the following new members were received, and after being passed on were ordered placed on the roll of the county society and their dues for this year sent to the secretary of the State Medical Association for membership in the same: Dr. T. B. Taylor, Dr. F. S. Lucky, Dr. C. G. Harris, Dr. J. E. Rutledge, all of Festus; Dr. E. L. Coffin, Herculaneum, and J. J. Commerford, Crystal City.

On a vote of the members present the society was ordered to meet at Festus, upon the call of the president.

Adjourned to meet on the call of the president.

O. E. HENSLEY, M.D., Sec.

#### LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met at Canton, Tuesday, May 14. The attendance was good and an interesting scientific program was rendered. The following members were present: Dr. P. W. Jennings, of Williamstown; Drs. P. F. Cole and C. N. Frame, of Ewing; Dr. J. C. Nunn, of Maywood; Drs. G. P. and Z. T. Knight, of Monticello; Drs. W. L. Ellery, N. O. Owens and W. C. O'Neal, of La Grange; Drs. R. A. Rebo, A. C. Crank, G. L. McCutchan and C. O. Shanks, of Canton. Visiting doctors were Dr. Johann, Jr., of Johns Hopkins University; Dr. F. J. Nichols, of Christian University, and Dr. Dangerfield, of Durham.

Mayor Millsbaugh, of Canton, welcomed the physicians to the city, where they met in regular session at the court house at 2 p. m. A number of interesting papers were read and discussed. The society adjourned to the Christian Church at 7:30 p. m., where a banquet was tendered them by the physicians of Canton, served by the Ladies' Aid of the Christian Church, consisting of five courses which was much enjoyed by all present.

Many of Canton's leading business men and wives partook of the festivities of the evening with the doctors.

The Ladies' Aid deserves special mention for this elegant spread. Music was furnished by Linn's orchestra.

Much interest was manifest by the members in the work of the society as the chief aim of this society is to elevate the standard of the physicians in Lewis county and with few exceptions every ethical doctor in the county is now a member. The society will meet again in regular session the second Tuesday in July, at Monticello.

PAUL F. COLE, M.D., Secretary.

#### ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, May 1, President J. I. Byrne in the chair. Twenty-eight members present.

Owing to the death of Dr. S. F. Kessler, no papers were read at the previous meeting and no business transacted so the minutes of the last two previous meetings were read and approved.

The question of purchasing an incubator for use in the Sheltering Arms Hospital and the doctors in St. Joseph in general was suggested by Dr. Gleaves. The matter was fully discussed. On the motion of Dr. Gleaves a committee of three was appointed to report at the next regular meeting in regard to price, etc. The chair appointed on this committee Drs. Gleaves, A. L. Gray, W. F. Goetze.

By motion of Dr. T. E. Potter, seconded by Dr. J. Geiger, a committee of three was appointed to draft resolutions expressing the society's appreciation of the gift of Mr. Noyes. The chair appointed the following on this committee: Drs. T. E. Potter, C. W. Fassett, J. Geiger.

Moved by Dr. Elam and seconded by Dr. Ladd that the delegates of this society be instructed to carry out the wishes of this body in regard to ruling of Insurance Commissioner Blake. Carried.

Considerable discussion took place regarding the attitude of this society's delegates at the state meeting, whether they should go instructed regarding the division of fees by the medical fraternity of this state. The following members took part in the discussion: Drs. Potter, J. Geiger, R. Willman, Kenney, Gleaves, Owens, O. B. Campbell, Hartigan and J. B. Reynolds.

A motion was made by Dr. Gleaves and seconded by Dr. Ladd that the delegates be instructed to support the resolutions as adopted by the St. Louis Medical Society which favors discontinuance of a division of fees. A standing vote was called for, and the motion prevailed. Ayes, 15; Nays, 7.

A very interesting paper was read by Dr. W. L. Kenney on "Subcutaneous Advertising," illustrated by the magic lantern. Discussed by Drs. Elam, Potter, Gleaves, J. Geiger, Stevenson.

Dr. F. H. Ladd read a paper on "Appendicitis as a Complication and Sequel of Typhoid Fever." This paper was discussed by Drs. J. Geiger and W. J. McGill.

#### FOURTEENTH DISTRICT MEDICAL SOCIETY

In response to the invitation of the Saline County Medical Society to the doctors of the Fourteenth District, there assembled about forty physicians at Elk's Hall, Marshall, on May 9. The meeting was called to order by Dr. A. E. Gore, president of the Saline County Medical Society. Dr. R. F. Evans, Boonville, was elected chairman and Dr. W. A. Braecklein was chosen as temporary secretary. A telegram from Dr. E. J. Goodwin, secretary-editor of the Missouri State Medical Association expressing his regret that matters urgent prevented his presence and expressing the hope that the meeting would be a good one, paving the way to a record-breaking association meeting at Sedalia, beginning May 21, was read.

Dr. Manning, of Marshall, read a paper on "Auto-Intoxication and Its Relation to Intestinal Indigestion." It was discussed by Drs. Gore, Richart, Roberts, Hall, Braecklein, McGuire, Carthrae and Spotts.

Dr. Roberts, of Lexington, presented a paper dealing with the much talked of division of fee. Dr. Roberts suggested a new remedy, a potent dose for the "lily-white" calamity howlers i. e., that surgery should be done in the country and smaller towns rather than be sent to the overcrowded, dust-ridden and germ-infested centers of population. The discussion was largely indulged in.

It was moved and seconded that inasmuch as the meeting had been very successful, both interesting and instructive, that a permanent organization be effected and that the officers of the society be a president, first and second vice-president and secretary-treasurer. The motion carried.

Dr. C. T. Ryland, of Lexington, was chosen president; Dr. R. F. Evans, Boonville, first vice-president; Dr. A. E. Gore, Marshall, second vice-president, and Dr. John R. Hall, Napton, secretary-treasurer.

It was moved and seconded that a committee on permanent organization be appointed, the counselor to be ex-officio chairman; that the matter of constitution, by-laws, rules and regulations be left with the aforesaid committee. The chairman appointed the following committee: Drs. W. L. Abney and R. L. Evans of Cooper; Drs. Braecklein and Tucker of Lafayette, and Drs. Manning and McGuire of Saline.

On motion a recess was taken until 7 p. m.

The society was called to order by President Dr. Ryland at 7 p. m. The committee on permanent organization reported the following: "We, the committee on permanent organization, beg leave to submit the following: We recommend that this organization be styled the Fourteenth District Medical Society of Missouri. We recommend that two regular meetings be held each year, the first on the fourth Thursday of April and the second the third Thursday of October. That the place of meeting be Marshall; that morning and afternoon sessions be held; that the dues be one dollar for current year; that a permanent committee on program be appointed, composed of one member from each county. We further recommend that constitution and by-laws be left to a subcommittee, composed of Drs. Ryland and Tucker and that they report on the same at the October meeting this year."

It was moved and seconded that the report of the committee be accepted and its recommendations concurred in. The motion carried.

The secretaries of the several county societies were appointed the committee on program.

It was moved and seconded that the Elk's Lodge of Marshall be given a special vote of thanks for the use of their commodious quarters, that the secretary be instructed to communicate same.

All business being transacted, the formal meeting adjourned to the banquet room.

C. T. RYLAND, President.

JOHN R. HALL, Napton, Secretary.

Membership roll of Fourteenth District Medical Society of Missouri.

Dr. J. H. Owens, Sweet Springs; Dr. W. A. Braecklein, Higginsville; Dr. A. E. Gore, Marshall; Dr. G. A. Richart, Blackburn; Dr. T. D. Smith, Nelson; Dr. E. M. Moore, Corder; Dr. T. W. Fischer, Alma; Dr. F. L. Anderson, Marshall; Dr. W. L. Abney, Blackwater; Dr. M. S. McGuire, Arrow Rock; Dr. A. J. Chalkley, Lexington; Dr. R. P. Price, Lexington; Dr. D. C. Gore, Marshall; Dr. P. L. Hurt, Boonville; Dr. C. W. Ott, Higginsville; Dr. G. E. Scrutcheff, Marshall; Dr. F. W. Tuttle, Mt. Leonard; Dr. C. T. Ryland, Lexington; Dr. D. F. Manning, Marshall; Dr. Lewis Carthrae, Corder; Dr. John R. Hall, Marshall; Dr. J. D. Jackson, Marshall, R. F. D.; Dr. George T. Weitz, Boonville; Dr. R. L. Evans, Boonville; Dr. B. C. Bradshaw, Arrow Rock; Dr. John R. Hall, Napton; Dr. J. E. Harris, Marshall; Dr. J. E. Connell, Marshall; Dr. L. S. James, Blackburn, R. F. D.; Dr. A. F. Brown, Malta Bend.

#### MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI, ST. LOUIS

The Medical Society of the City Hospital Alumni, St. Louis, held its regular meeting on May 2 in the auditorium of the St. Louis Medical Society.

This was the annual public meeting of the society and attracted a very large and appreciative audience, consisting largely of laymen. The whole program was rendered and created a deep impression on those who are interested in the subject of the conservation of child life. The topic was "Evil Hereditary Influences of Children." The following papers were read:

"From the Standpoint of Catholicism," by Rev. F. J. O'Boyle, S.J., Professor of Philosophy, St. Louis University.

"From the Standpoint of Judaism," by Rev. Dr. M. Spitz, editor of *Jewish Voice*.

"From the Standpoint of the Criminologist," by Judge Geo. H. Williams, ex-circuit judge of St. Louis.

"From the Standpoint of the Medical Profession," by Frank R. Fry, M.D.

The discussion was opened by Prof. William Schuyler, assistant principal McKinley High School, and Drs. M. A. Goldstein, E. W. Saunders and W. W. Graves, Mrs. C. A. Stix, Mrs. P. N. Moore and others prominent in communal affairs, took part.

In the last issue an error occurred in announcing Dr. Alexander E. Horwitz as the author of the paper on "Lantern Slide Review of Cystoscopy, and of Prostatic, Vesical, Ureteral and Renal Surgical Conditions." This paper was prepared and read by Dr. Bransford Lewis.

THE Ozark Sanitarium Association of Springfield has chosen the following nucleus of the staff of the institution: Dr. B. F. Fortner, surgeon in chief; Dr. G. B. Lemmon, assistant surgeon and pathologist; Dr. F. B. Fuson, internal medicine; Dr. Thomas T. Umbarger, dental and oral surgeon.



## BOOK REVIEWS

**TUMORS OF THE JAWS.**—By Charles L. Scudder, M.D., Surgeon to the Massachusetts General Hospital. Octavo of 391 pages, with 353 illustrations, 6 in colors. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6.00 net; half Morocco, \$7.50 net.

The object of this volume is to familiarize the practitioner with a condition not frequently met with. The author has availed himself of all the general medical literature on the subject which he was able to obtain, and has given special attention and study to the clinical material at the Massachusetts General Hospital.

The aim of the work is two-fold: that of assisting the physician to determine the form and treatment of a new growth in a given case, and to vivify each particular jaw tumor by statistical and case history, so that new growths may be easily recognized in their early stages.

Dr. Scudder's book fills a want that has existed since the beginning of this branch of surgery and it will be received with enthusiasm.

**DUODENAL ULCER.** By B. G. A. Moynihan, M.S. (London) F.R.C.S., Senior Assistant Surgeon at Leeds General Infirmary, England. Second edition, enlarged. Octavo of 486 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The last ten years have seen the knowledge of this important subject pass from the theoretical into the practical state which is so clearly presented in this work. This is illustrated by the history of duodenal ulcer which serves as an introduction to the volume.

The second edition comes out within a few years of the first and contains some minor changes in the chapter on differential diagnosis, and the results of x-ray examination of the stomach after bismuth administration.

The first edition has already won for itself a secure place in contemporaneous medical literature and we do not feel that further word is necessary.

**DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY.** By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Clinical Medicine, University and Bellevue Medical College. Third Revised Edition. Octavo of 639 pages, 339 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5 net; Half Morocco, \$6.50 net.

This work now reaches its third edition in five years, amply justifying its scope and object.

The authors have endeavored to give the practitioner a book which should possess a certain direct utility for general practice, therefore it is not exhaustive and aims to present only those phases of the subjects it handles which are pertinent to the needs of the general physician.

The revision and enlargement of this edition has been made with great care and only those innovations have been introduced whose value, in the eyes of the authors, have been proven beyond question.

**DIFFERENTIAL DIAGNOSIS.** Presented through an analysis of 385 cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard Medical School. Second Edition. Octavo of 764 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5.50 net.

The working idea of the volume is the utilization of the presenting-symptom, by case history method, to demonstrate to the student how a reasonable diagnosis may be obtained through discriminating observance and a correlation of the facts found in the history of the case, the physical examination, and the laboratory findings.

The second edition contains certain minor corrections in typography, with a reorganization of the index and table of contents and the addition of two new cases.

**CYCLOPEDIA OF AMERICAN MEDICAL BIOGRAPHY.** By Howard A. Kelly, M.D., Professor of Gynecologic Surgery at Johns Hopkins University, Baltimore. Two octavo volumes averaging 525 pages each, with portraits. Philadelphia and London: W. B. Saunders Company, 1912. Per set: Cloth, \$10 net; Half Morocco, \$13 net.

This biographical cyclopedia gives a concise and complete biography of the men and women in the United States and Canada who have distinguished themselves by contributing to the dignity and advancement of medicine from 1610 to 1910. It contains about twelve hundred names. The work is worthy of the genius of a man like Dr. Kelly.

The introduction covering about seventy pages gives historical sketches of the principal branches of medicine and surgery in this country and Canada.

**A NEW CONSCIENCE AND AN ANCIENT EVIL.** By Jane Addams. Author of *Democracy and Social Ethics*, *Newer Ideals of Peace*, etc., etc. New York, The Macmillan Co., 1912. Cloth 12 mo pp. 218. \$1 net.

The book consists largely of matter which has appeared from time to time from Miss Addams' pen in current periodicals dealing with the greatest problem that has ever arisen; which has always existed from the beginning.

Gathered together here it gains in strength, presenting as it does a solid front of fact and discussion. The book is vivid and impelling. It is alive, and gives facts candidly, and illustrates conditions straight from the shoulder.

The remedy for the amelioration of the amazing conditions of the women of the working world, as Miss Addams sees it, lies in a universal betterment of the wage dealing phase of social existence.

Miss Addams is optimistic of the finalities in the matter, but one could not dare to approach the question were they unpossessed of hope.

It is true that this problem of the sale of women's virtue is ancienter than any other, is saddled with an ancestry that dates from the beginning, and is ramified as no other evil has ever been, yet the problem is being approached as no other problem ever has been approached, and is so intimately concerned with the universal conditions of the time that he would be rash indeed who would thus early pronounce upon the question in terms of irrevocable condemnation.

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